Gold and Silver

BY

JOHN HUNGERFORD POLLEN.

SOUTH KENSINGTON MUSEUM ART HANDBOOKS.

EDITED BY WILLIAM MASKELL.

GOLD AND SILVER SMITHS' WORK.

These Handbooks are reprints of the dissertations prefixed to the large catalogues of the chief divisions of works of art in the Museum at South Kensington; arranged and so far abridged as to bring each into a portable shape. The Lords of the Committee of Council on Education having determined on the publication of them, the editor trusts that they will meet the purpose intended; namely, to be useful, not alone for the collections at South Kensington, but for other collections by enabling the public at a trifling cost to understand something of the history and character of the subjects treated of.

The authorities referred to in each book are given in the large catalogues; where will also be found detailed descriptions of the very numerous examples in the South Kensington Museum.

W. M.

January, 1879.

GOLD AND SILVER SMITHS' WORK.

BY

JOHN HUNGERFORD POLLEN, M.A.

WITH NUMEROUS WOODCUTS.

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CHAPTER I.

GOLD AND SILVER METALS.

THE estimate set on gold as the representative of wealth can be traced through every record of history. Except in countries peopled merely by wandering families roaming over plains and pastures, and counting their riches only in the numbers of their flocks and their herds, all possessions have been exchanged for the two precious metals, gold and silver.

These metals have been sometimes taken in exchange by weight, in the shape of ornaments for the neck, the arms, the ears, or the ankles; sometimes in the rude form of dust, bars, or ingots; sometimes stamped with the mark of kings, governments, or cities. Perhaps the earliest recorded mark of this kind was the image of a sheep or an ox, the metal being called in Latin from that image "*pecunia*" from "*pecus*," cattle, representing so much live stock.

Gold has been taken by the common consent of mankind as the fittest representative of wealth both in ancient and in modern times for the following (amongst many) reasons:

1. Gold is of real value as merchandise and is used for many purposes, whether it is stamped and coined or merely sold by weight. 2. This value being acknowledged, gold is less in quantity and more easily carried about than any merchandise or produce for which it is taken in exchange. 3. The changes in the value, or (in other words) the quantity of food or produce for which a given quantity of gold will stand, are independent of sudden political or commercial troubles. 4. Gold is spread too widely over the world to allow any risk of its being all gathered into the hands of one or a few persons, as precious stones might be. 5. Gold is not subject to alteration by time, by chemical agents, by frequent melting and recasting; and it can be preserved without trouble. 6. Wherever gold is found it is one and the same in substance. Diamonds, which are of greater intrinsic value, depend on many conditions, and have faults only known to persons of skill and experience in buying them. 7. Gold can be divided (a coin *e.g.* representing twenty shillings can be divided into twenty parts, each worth one shilling), and the parts either separately or together, or recast, retain their intrinsic value. The carat, on the other hand, in diamonds increases in value in proportion to the size of the stone, but if a diamond were divided into many pieces, by far the greater part of each would lose most or all of its value. 8. Gold takes and will preserve the most delicate stamp. 9. Lastly, though so soft and ductile a metal, it can be made hard enough to wear very long with but slight loss of its value.

The ductility of gold, which is little harder than lead, has always been known as a valuable quality. One ounce could be beaten out according to Pliny into 750 leaves "four fingers square." This extension is far exceeded by gold beaters of the present day; according to Chambers, modern gold leaf if beaten from an ingot weighing two ounces, when at its extreme thinness of $\frac{1}{200000}$th of an inch would cover about 200

square feet. As regards weight, the ancients knew nothing of platinum or iridium, metals heavier than gold.

One other element in the value of gold, specially in reference to gilding, is the glory and beauty of the colour. Pliny notices the high value of this aspect of the metal which he calls the colour of the stars, but declares that silver is seen from a greater distance, and that it was on that account used by the Romans on the military standards. The only remains, however, of these insignia now known are of bronze and probably were always gilt.

The language of poetry has borrowed the name of gold as that which signifies the yellowest and richest hue of the rays of light when they slant over the face of nature at the rising and the setting of the sun. The "golden morn," "the waves tipped with gold," the evening sky "barred with gold." Again the harmony of this yellow light with purple has ranked "purple and gold" as royal colours, reminding us of these broken rays "passing from gold into orange, from that into rose, from that into purple:" and once more the colour specially suggested by gold has acquired a moral significance. We speak of golden hopes, golden dreams, golden prospects, and the golden age, the earthly paradise of the ancient poets, "*Saturno rege*," when innocence and peace reigned over the earth before material gold was dug. The word golden, in this sense, refers to the brightness, glow, luminousness of the metal, as well as to the abundance it represents.

Gold is found alloyed with various metals, never without some mixture of silver, often with copper, iron, or other substances in small quantities, and sometimes with mercury, when it is called an amalgam. Gold alloyed with silver is called native gold, and in this form has its chief commercial importance. The silver in this combination varies in proportion from one hundredth to one half of the entire substance. Gold so alloyed takes the form of particles, water-worn plates,

scales, occasionally of crystals and then of octohedra. Gold dust (particles of various size and weight, the larger known as nuggets) is found in alluvial washings. When the metal is in veins it is generally inclosed in a quartzose gangue or gold quartz, disseminated and associated with other mineral substances, but it is also found in the form of threads, thin plates, and grains not always visible to the eye.

Gold is distributed in rocky veins over the earth. A considerable portion of the gold-bearing rocks belongs to the palæozoic, some to the azoic, strata, the two lowest geological groups; but the gold-bearing veins vary much, not only in dimension but in productiveness. The most productive veins contain great quantities of disseminated sulphurides, and these as the veins become worn and decayed by heat and cold come close to the surface, are decomposed, and liberate the granules of gold. In this state the gold particles are moved by the action of water and become the gold sands in water courses; nuggets, and plates. Though found in more or less abundance near the surface of the earth this accumulation in some of the gold fields is the result of very long periods, during which the veins have been in process of decomposition, and abundance is not necessarily a sign of veins of extraordinary richness. On the other hand, it has been thought that veins get poorer as they are worked deeper down, but Professor Phillips shows this to be an error.

Gold is extracted from the substances in which it is mixed or embedded by breaking up the quartz and picking out the parts containing the ore, which is then fused; or by simple washing; or it is separated from other metals by means of mercury with which gold easily amalgamates, and from which the mercury is afterwards evaporated; and by other processes.

Gold exists in small quantities in England and Wales; in the tin mines of Cornwall and Devon; and over a small area of a few square miles north of the road from Dolgelly to

Barmouth. Small quantities of gold had been found in Scotland during the reign of James V.; that "active and patriotic prince obtained miners from Germany, who extracted both silver and gold from the mines of Leadhills in Clydesdale. The gold was of fine quality, and found in quantity sufficient to supply metal for a very elegant gold coin which, bearing the head of James wearing a bonnet, has been thence called a bonnet-piece." Gold is now found in Sutherlandshire, but whether in quantities sufficient to repay the working of mines it would be premature to state. In Ireland gold has been found from a very early date, and the number of gold ornaments, such as torques or twisted neck collars, reliquaries, and vessels for ecclesiastical use, made in Ireland during the middle ages was great. It would be interesting to be able to make some authentic computation of the quantity of treasure trove of this kind that has been collected in the royal Hibernian academy and in private hands. There are no data to be relied on for more than guess work on the subject. Great quantities have been melted down. I have been told that from 250,000*l.* to 300,000*l.* sterling is probably within the intrinsic value of the metal, and perhaps this amount might be put at a far higher figure.

Small quantities of gold are found in France; some also comes from the Rhine, the washing of the sands of which river was formerly farmed by the municipality of Strasburg. Spain and Portugal produce gold. The yield of the Spanish mines is much reduced in modern times. They had a great name in this respect in the times of the Roman emperors, particularly those of Gallicia, from which the gold was very pure. Remains of ancient works on a grand scale are still to be traced in several parts of Spain. The Norician Alps were said to be highly productive of gold at a very much earlier period. The mines of this region passed into the possession of Rome under the emperors. Gold was found in Piedmont and Savoy, in the

sands of the Po in ancient times, and a fair quantity is still said to be produced on the southern slopes of Monte Rosa. In Hungary and Transylvania gold mines have been continuously at work since the eighth century. Washings on the Iser in Bohemia produce a small quantity, and the Bohemian mines were of some importance from the eleventh to the fifteenth century. The amount of gold now produced from all parts of Germany is very small. The greatest production in any European country at the present day is that from the western slopes of the Ural mountains in Russia; but Russia draws supplies of gold from Siberia and the Caucasus.

Much greater quantities of gold are found in Australia and California, the Australian being the most pure. The gold produced in Brazil has declined in quantity since the middle of the last century.

From very ancient times gold has been found in considerable quantities in India and other parts of Asia. Much was brought to Europe in the course of trade and as spoils of war. It was abundant in ancient Egypt though not, apparently, coined in that country. King Solomon was supplied with gold by trade regularly carried on by way of the Red Sea. Gold was found in Colchis, of which the fable of the golden fleece may be taken as evidence. Saulaces, king of that country, is said by Pliny to have plated his palace with gold taken from Sesostris, king of Egypt. The rivers reputed by the Romans to have gold-bearing sand were the Tagus, the Po, the Hebrus in Thrace, the Pactolus, and the Ganges.

Silver.

Native silver occurs sometimes in a state of purity, but oftener mixed with other metals and substances. Alloys of silver and gold are numerous, and the silver sometimes so preponderates as to show merely traces of gold. It is also found as an amalgam; that is, associated with mercury; in vitreous sulphide of silver or silver-glance, the most important

of the ores of silver; and in various other ores. "Few metals," says professor Phillips, "enter into a greater variety of natural combinations, or are found over a wider geological range than silver. It is said to exist in minute traces in some organic bodies and in the waters of the ocean."

As to the places in which silver is produced, the mines that have been the longest worked are those of Schemnitz. A school of miners was established there by the empress-queen Maria Theresa in 1760. There are many and productive silver mines in the Erzegebirge districts of Saxony and Bohemia. Those in the Hartz mountains are worked but produce less silver. Spain in ancient times was rich in silver mines. The production is now nearly confined to the mines of a single district. The famous silver mines of Laurium in Attica were a source of wealth to Athens from a remote date. The Athenian coinage was in silver. The word *ἀργυριον*, a silver piece (as the French word *argent*), came to mean money generally. Our own word money is derived from the word *moneta:* the temple of Juno Moneta was the depository of the Roman mint. The word *pecunia* has already been explained.

A great amount of silver has been produced and imported into Europe since the discovery of America. The greatest quantity is now produced in Mexico. The mines of Veta Madre of Guanaxerato are over 300 fathoms deep. The mines of Nevada, discovered only in 1859, are of extraordinary richness. Next in rank as to quantity are the mines of the United States, Chili, Peru, and Bolivia.

CHAPTER II.

GOLD AND SILVERSMITHS' WORK AMONG THE ANCIENTS.

It is said in the book of Genesis that Abraham in the twentieth century B.C., "when he went out of Egypt," was very rich not only in cattle but in silver and gold, acquired probably in exchange for his cattle in that country. This gold was both wrought and in ingots and dust; golden earrings and bracelets are spoken of Gen. xxiv., but it is remarkable that no coined gold or silver has been found among the ruins either of Egypt or Nineveh. Gold was used as a medium of exchange by weight by both people.

Abundant examples of the goldsmiths' work of the Egyptians remain in our museums, or may be studied in the paintings still to be seen in Egyptian tombs, and in the elaborate books that have been published on Egyptian antiquities during the present century. It will be enough here to refer to a remarkable set of gold ornaments exhibited during the great exhibition of 1862 in London. These belonged to the Khédive of Egypt, and had been found at Thebes by M. Auguste Mariette. They were in the case containing "the mummy of queen Aah-Hotep," whose date is about 1500 B.C., and consisted of a poignard with a gold blade on which was engraved a combat between a lion and a bull, with the cartouche of king Amosis, son of the queen named, and first king of the eighteenth dynasty. A diadem,

on each side (or extremity) of which is a couching sphinx. A hatchet, the symbol of divinity: on the blade is a representation of Amosis immolating a barbarian, with the whole legend of the same king inscribed on the handle. A square pectoral brooch, having the appearance of being enamelled, but in reality set with coloured stones. A jewel representing king Amosis standing on a bark between two divinities who are pouring over him the waters of purification. A jewel formed by three bees of massive gold. A gold chain of woven pattern, three feet long, from which is suspended a scarabæus. A bracelet of massive gold ornamented with repoussé figures reposing on a ground of lapis lazuli together with the figure of Amosis. A boat of massive gold on four wheels of bronze; this was found with the mummy of the queen, and was a symbol of the departure of the soul of the deceased; the towers are of silver, and on the prow is a cartouche with the name of king Rameses, husband of the queen and father of Amosis. These jewels were without enamel though inlaid with coloured stones.

The Egyptians both worked mines and exacted annual tributes of the precious metals from the conquered provinces in Asia and Africa in the form of dust, vases, and other manufactured objects. The Egyptians made statues and vases as well as jewels in gold, silver, and silver inlaid with gold. Such jewels were common in the eras of Osirtasen the first and Thothmes the third (the contemporaries of Joseph and Moses).

The goldsmiths' work and metallurgy of the Hebrews have so close a connection with that of ancient Egypt that in a review of these arts the two people may be considered together.

The sacred vessels of the Jewish tabernacle, of which detailed accounts are given in the book of Exodus, were made from jewels and vessels of gold and silver borrowed from the Egyptians, and forced upon the Hebrews in order to induce them to leave the country. The objects made in the desert of mount Sinai were (1) the ark, a sacred chest or reliquary to hold the stone

tables of the law; the pot holding miraculous manna; and the rod of Aaron that blossomed; (2) the propitiatory or mercy seat; (3) the altar of incense; and (4) the seven-branched candlestick. Censers were used to burn incense during solemn acts of worship. Tongs, snuffers, and other necessary utensils for trimming and making the lights and fires, were of the precious metals. The sacred chest was of mimosa wood, overlaid with gold inside and out; it had a crown or cresting of leaf-work round the upper edge and loops of gold at the corners, through which passed two poles that were never removed. The table of proposition, on which were kept twelve loaves answering to the twelve tribes, was of the same wood overlaid with gold, with a cresting or crown round the edge four fingers broad, and another cresting pointing downwards.

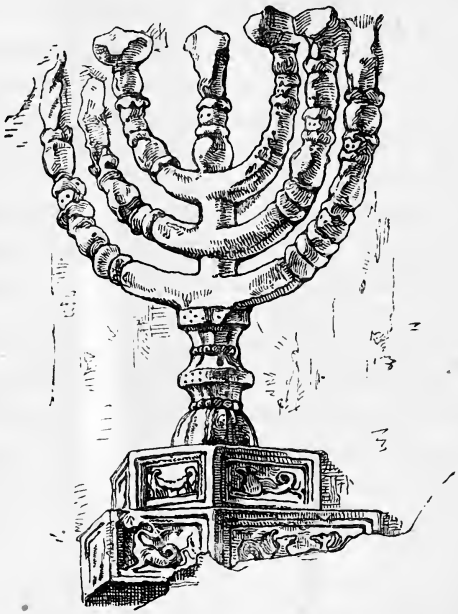
Two cherubim, symbolic figures (perhaps of animals or human-headed) with wings stretched out facing each other, were placed on the propitiatory or seat of mercy, a pedestal or bench that stood over the ark; a description that might also stand for the outstretched wings so common in Egyptian paintings and bas-reliefs. These figures were of beaten gold as well as the mercy seat, which was of the same length and width as the ark. The capitals of the columns that fronted the sanctuary, and the hooks and sockets that could be seen, were also of gold. Objects less sacred were of silver, and the metal work that fastened the wooden inclosure round the whole sacred structure (the boards of which were used to cover and pack the sanctuary and the vessels kept within it) were of brass or bronze.

The goldsmiths who made these vessels were Bezaleel and Oholiab but under the direction of Moses, according to a pattern revealed to him in a vision. All had special lines, parts, and proportions; special numbers and combinations of numbers were prescribed in the parts and details of composite objects, such as the twelve oxen that supported the fountain or laver of bronze. The most exact details are given us in

words as to these prescribed conditions, which were rigorously carried out. But of the art, the form, or character of the decoration we know nothing. Whether the crestings, capitals, even the cherubs, were of an Egyptian type or had anything in common with Greek or with oriental or with mediæval European art we can but conjecture. With the exception of the golden candlestick, trumpets, and the table (?), sculptured on the inside of the arch of Titus, we have no representation of these utensils. It is astonishing how differently different ages and countries represent their style and decorations. In the middle ages and at the revival artists made pictures and imitations of the seven-branched candlestick, for example, without the smallest regard to archæology. And so we are left to complete the idea of the Hebrew goldsmiths' work for ourselves. With regard to all the sacred vessels, while it is certain that the details significant or typical of theological truths or mysteries were in no way left to the artificers, details of ornamentation would seem to have been considered less important. The conditions required could be carried out (as we should say) in any style, and both Moses and his assistants had been trained in Egypt, though as they inhabited a particular and separated province they might have retained primitive methods of working. It is probable that the metallurgy of the Hebrews was not very unlike that of the Egyptians.

To return to the golden candlestick, which figures in the sculptures inside the arch of Titus at Rome. This was an object of curiosity from its peculiar shape, and the perpetual light it maintained; a figure likely to make a deep impression on the heathen nations of antiquity. It was carried to Rome along with the table of prothesis (?); probably not the original table, nor that of Solomon; possibly that mentioned in 1 Maccab. iv. 49, when many new vessels were made. A splendid table was given also by Ptolemy Philadelphus, and this is perhaps the table shown in the sculptures.

The candlestick was of pure gold, a talent in weight; the stem was made up of bosses and leaves alternating, the description of which in Exodus is rather obscure; three cups or bowls like nuts or almonds, with lilies or flowers. The description which comes nearest to the sculpture as now seen



SEVEN-BRANCHED CANDLESTICK.—ARCH OF TITUS.

in Rome is that of nuts, with the foliated involucrum curling over the lower part of the boss or fruit, and a bowl at the head of the straight part of the stem, the receptacle of the oil and wick. The six branches are segments of circles curving out at regular intervals in three sets, with a bowl or boss under each pair of branches, coming to one height above and ranging in one line of lamps along with the centre light. It was kept always lighted; was placed south of the tabernacle, opposite to

the table which was on the north side. The base, as represented in the sculpture, is in two plinths, panelled on the sides with griffins or winged animals in bas-reliefs, intended to represent the Jewish cherubim (?). The three sides of the base seen on the arch, and as given in the woodcut, represent three sides of an octagon not of a hexagon. The lower part of the stem spreads out into a ring of conventional petals, like an inverted lily or flower cup. No allusion to the octagonal base is contained in the Mosaic account, and some think it to have been an addition to the original candlestick. The whole base may possibly have been a Roman restoration. The candlestick is said to have been so high in its original form as to have required the use of steps to trim the lights. Many parts therefore of the stem or base might have been lost or injured and replaced.

The lights were symbols of the Divine Presence; the seven spirits of God, seven eyes. The number seven was a "number of perfection," sometimes used to mean many; seven times, many times; so again in multiples of seven, "seventy times seven," *i.e.* any number of times. It was a number of continual recurrence in the Christian ritual: it became a subject of frequent comment by the Fathers, and ruled the dispositions of many mediæval founders, builders, and architects.

The later history of the golden candlestick is not clearly recorded. There is a loose tradition that it was carried away by Maxentius and thrown into the Tiber as he fled over the ponte Molle in the fourth century; and hopes are entertained of its recovery when the new drainage of that river is complete. Gibbon, however, expressly states that the holy vessels were carried in the triumph given to Belisarius at Constantinople after the subjugation of Africa in 334. He brought the candlestick from Carthage: "The holy vessels of the Jewish temple, after their long peregrination, were respectfully deposited in the Christian church of Jerusalem." It had been taken to Carthage

by the Vandals. In the year 614 Jerusalem was taken by the Persians under Chosroes. "The sepulchre of Christ and the stately churches of Helena and Constantine were consumed, or at least damaged, by the flames; the devout offerings of three hundred years were rifled in one sacrilegious day." From that time the golden candlestick is lost sight of in history.

The sacred vessels and utensils made for the tabernacle remained in use after the completion of the temple of Solomon. Many more were added, larger, and some of them of great value. The sanctuary was lined with plates of gold; walls, ceiling, and floor. All the carved work on the walls and doors was gilt. Two great cherubim ten feet high, of olive wood, were covered with the same precious metal; hanging chains about the capitals of columns and all hinges and fastenings were of gold.

The offerings made by foreign nations to Jewish kings were of gold and silver. The queen of Sheba offered Solomon 120 talents of gold, 200 shields containing 600 shekels of gold (the shekel was worth about 50*l.* sterling), 300 shields of silver containing 300 minæ, roughly to be valued at 1,200*l.* each. The shields were kept in the temple as royal ornamental treasure, and were carried away as spoil of war by the Egyptians in the succeeding reign.

The state or royal furniture of the palace of Solomon was of gold, silver being of no account owing to the abundance of the more valuable metal. His throne was of ivory partly covered with gold. Two large golden lions were the supports of the seat, probably not unlike those that support many Greek, Roman, and Egyptian thrones; and twelve smaller golden lions were placed two and two, on the steps that led to it. It may be observed that a life-sized head of a tiger, of thick hammered gold over a wooden model, one of several which supported the throne of Tippoo Sahib, is now in the royal collection at Windsor castle.

With regard to the Assyrians Mr. Layard states "that from India, through Media, Hyrcania, and central Asia, gold and various precious stones were probably supplied to Babylon and Nineveh. Gilding appears to have been extensively used in decoration and some of the great sphinxes may have been overlaid with gold, like the cherubim in Solomon's temple. I cannot however" he continues "but express my conviction that much of the metal called gold, both in the sacred writings and in the profane authors of antiquity, was in reality copper alloyed with other metals, the *aurichalcum* or *orichalcum* of the Greeks, such as was used in the bowls and plates discovered at Nimroud." No gilding or overlaying of this description was practised in Egypt so far as our knowledge goes, and in the metallurgy of the Jews and of king Solomon, gold, silver, and brass are too constantly and expressly distinguished to allow the gilding or plating with gold used in the temple and in king Solomon's palaces to be mistaken for such a decoration in mixed metal. It is evident that great quantities of gold were imported into the kingdom of Solomon, and most of this was devoted to sacred or to royal buildings, very few in number; not to houses, palaces, or public buildings scattered over the land; and for such purposes there must have been real gold more than enough.

Though the Assyrians may have used mixed metals for gilding external walls "they had" says Mr. Layard "abundance of gold and silver and carried away artificers from conquered countries; craftsmen, and engravers from Jerusalem in the Babylonish captivity." Dr. Birch remarks (in his observations on the statistical tablet of Karnak) "that the silver vases of the Tahai are a remarkable tribute, as they show an excellence in working metals among these people: indeed the art of toreutic work in Asia influenced so largely the Greek work at a later period as to rival and gradually supersede the fictile painted vases of the Greeks." Mr. Layard mentions "offerings of vases of gold and silver with handles, feet, and covers, in the shape of animals,

such as the bull and gazelle (or wild goat), kneeling Asiatics, the heads of lions, goats, and even of the god Baal. The tribute obtained by the Egyptians from Naharaina or Mesopotamia consisted of vases of gold, silver, and copper, as well as precious stones."

The walls of Ecbatana 700 years B.C. were in seven circuits, and the two inner lines had bulwarks or parapets; one silvered and the other gilded. In this instance perhaps a mixed metal was used. The masonry of the other walls was stained. The temple of Belus, in Babylon, had a seated golden image of colossal size; the throne and the base were of gold, as well as a large table and a pedestal in the porch. The statue set up in the plains of Dura was sixty cubits high and six cubits broad. Both statues were probably plated on a frame of wood, and this Asiatic method was adopted by Phidias and other Greek artists, the gold being hammered and engraved, in plates of appreciable weight and thickness, and not mere gilding. There was also in Babylon a column of solid gold, twelve cubits high, which was carried off by Xerxes. More beautiful, and probably highly wrought, specimens of Asiatic or Asiatic-Greek workmanship were a vine and a plane tree of solid gold, the leaves all hammered and chased. Pliny speaks of the treasure brought away by Cyrus, in addition to the vine and plane tree and the bowl of Semiramis, weighing fifteen talents.

The Romans had many mythical traditions of Asiatic splendour. For instance, the story told by Athenæus of the death of Sardanapalus, who built his funeral pile of perfumed wood and put on it 150 beds of gold, on which his mistresses reposed to share his death, with 150 tables of the same metal, 10,000,000 of talents of gold, and 100,000,000 of talents of silver, costly robes, purple garments, and apparel of every imaginable kind. This gorgeous funeral pile burned for fifteen days.

The ancient traditions of these barbaric riches have come down to us through a "golden" haze of exaggeration and fable,

but exaggerations have commonly a real foundation, as fables group themselves round some true stories. There were, and there must have been, great stores of the precious metals among the ancient oriental monarchs and princes. Property of this precious kind, indeed, was in few hands, and was treasured and hoarded in ingots, vases, and costly furniture; in things that retained their actual value for state emergencies, while they were visible symbols of wealth and royalty. Curious particulars of a family banking firm "Egibi and sons" of Babylon, in a later age, have been discovered from some Assyrian tablets in the British museum. They were agents, lenders of money, and perhaps dealers in the precious metals. Banks in the modern sense of the word, exchange, circulation, and other financial philosophy were unknown. The size and splendour of the objects made were also some security against robbery, and tended to keep these objects from destruction and waste, as they passed from hand to hand in the way of guarantees, tribute, or plunder. The quantities therefore of the precious metals did not under these great eastern monarchies waste, as they do in modern times, but accumulated from reign to reign and from one conquest to another. It is reasonable also to suppose that native gold found in superficial diggings, in river washings, and amongst the débris of gold-bearing rocks, had accumulated on or close under the surface from the patient chemistry of natural agencies, slowly but surely, during long periods of time. As the various climates of the earth were tempered and prepared for the several races of mankind such riches lay more or less ready for the hands of these ancient rulers of the east. One dominant race succeeded to another, and each absorbed the existing stock of the precious metals in turn; it was collected and hoarded till a rival arose strong enough to carry off whatever had not been buried or wasted in tissues and small ornament.

CHAPTER III

GREEK GOLD AND SILVER WORK.

THE various Asiatic monarchies and states came into contact with the Greeks as they neared the shores of the Mediterranean and the Egean. Into the fertile and beautiful countries of Asia minor colonies of Greeks had been pushed from an early date. A great Ionian migration took place about 1000 years B.C. The Greeks were not then settled for the first time on the seaboard of Asia: they had already made settlements, had acquired riches and power, and had engaged in war with various fortune. But they returned in greater numbers and power about this time, and grew into more wealthy and luxurious societies. "The settlements of Greece," says Mr. Clinton, speaking of this immigration, "gave birth to new and flourishing communities, equal, and often superior, in wealth and population to the mother city." The colonists adopted much of the manners and learnt many of the arts of the wealthy states around them.

A supply of the precious metals and the art of working them came to these Greek populations from the east. The statement of Dr. Birch, already quoted, suffices to show how this command of the precious metals affected the manners of a vigorous people, driven by want of space and ever-increasing numbers to seek new fields of adventure and soil broad

enough for its rate of growth. The gold which had barely been enough for small jewels and personal ornament was multiplied till it spread into the dimensions, not of vases and cups only, but of beds, thrones, and the ornaments of chariots and armour.

The Homeric heroes have gold shields, such as that of Achilles; gold armour, such as that exchanged between Glaucus and Diomede; as well as golden furniture. Poetic descriptions perhaps: but it should be borne in mind that the poet wrote at about the period of the Ionian immigration, and the splendour with which his champions are surrounded was painted from instances real, though rare, which were known and could be seen in his own day. The gold belts, baldrics, buttons, helmets, breastplates, ornaments of leg armour, &c. just discovered by Dr. Schliemann at Mycenæ belong, as some believe, to this early age. Many are of great size and weight, and the great number of objects worn and of those made as funeral ornaments argues, according to some archæologists, the existence of goldsmiths who kept stocks of wrought gold on hand. More than 1,500 gold crowns, bracelets, vases, spoons, and gems, found at Kourioum in Cyprus, were offered to the British museum in 1876. About a hundred vessels were of silver, showing examples of hammered, embossed, and chased work. A few were inlaid with gold. They were of Egyptian, Babylonian, and Asiatic Greek workmanship, a few of the latter showing traces of enamel and ranging in date from 1000 to 600 B.C.

It was long before the Greeks of Europe were rich enough to make either vessels or furniture of gold and silver for general use, not, probably, till after the defeat of the Persians and the final expulsion of their armies from Europe after the battle of Platæa, in the fifth century before our æra. Herodotus describes the spoil that was taken after the battle; tents mounted with gold and silver as well as beds, couches, vases, and vessels of all sorts.

A vast number of personal ornaments, such as wreaths, brooches, earrings, chains, and coronets, have been found during late years in tombs in various parts of Italy. These were the work of Greek colonists in Magna Grecia or of the Etruscans, who were of eastern origin. The ornaments are of two kinds; those made for funerals which are of extreme thinness, and those for wear. Several beautiful examples will be found among the jewellery of the South Kensington museum and in the jewel room of the British museum.

The skill and refinement of the early Greek goldsmiths, as well as of the greater artists to be named presently, were very great. Though they did not hammer up statues or large vessels embossed with figures as the chief sculptors who succeeded them, there were few methods in use in later times that were unknown to these ancient workmen. Many of their secrets remained unknown for centuries after the destruction of the Roman empire, if not all but lost and forgotten long before. The use of the graver, with which the artists of the fifth and later centuries B.C. executed compositions and figures of astonishing delicacy, seems to have been unknown to them. Their skill lay in their knowledge of solder and metallic or other cements. With the help of these they joined pieces of gold wire drawn out to an incredible fineness, and grains so small as to be scarcely discernible, separately on surfaces of smooth metal. Acorns, beads, buttons, or tiny vases covered with fine down, or with grains of gold, and other pieces seeming at first sight to be beaten up in relief, are in reality built up by soldering minute plates or grains one over the other. For years the process by which these junctions were managed defied the research of Caetani and Castellani, the most accomplished artists in gold work of this kind known in our day. They succeeded at last in finding one or two workmen in the small town of S. Angelo in Vado, with whose help they have recovered some of these forgotten methods. The wandering

goldsmiths of several parts of India make gold jewellery of the same kind, though coarse by comparison with the ancient work, but by the same methods and by the use of the same cements and solders. No workmanship, however, of modern times has yet equalled that of the gifted Greeks.

It was after the end of the long struggle with the Persians that the Greeks became independent at sea, and grew rich by commerce. Then followed the great age of Greek art. Sculpture and painting were carried to the highest perfection, and the great sculptors worked in the precious metals. Artists seem to have devoted themselves to the making of vases, cups, and other small goldsmiths' work, or decorations that could be laid on or let into larger objects of bronze, ivory, or some other materials, shields, chests, tables, thrones, and the like. A number of small figures of gold making up groups and compositions and illustrating local legends and mythical stories were inlaid in the ivory chest of Cypselus kept in the temple at Olympia. A movable head of Gorgon made of gold was fastened on an ægis of Minerva and hung up in one of the temples at Athens. Phidias made large statues of ivory and gold (chryselephantine), some of colossal size. His famous statue of Athene, the guardian goddess of Athens, was kept in the Parthenon. What portions of the statue were made in ivory and what of gold is only to be gathered from the rather vague descriptions of Pausanias who saw this statue during his travels towards the end of the second century. Probably the head, neck, limbs, and all parts representing flesh, were of ivory and painted. The drapery was gold. On the head was a helmet with a lofty crest, and a sphinx with gryphons on each side supported the crest. The breast was covered by a cuirass of gold; the head of Gorgon in the middle had been of gold, but was replaced by one of ivory when Pausanias saw the statue. In her right hand the goddess held a Victory four cubits high, and a spear in her left. A large shield by her side was embossed with hammered gold inside and out. The inside

represented the contests of the giants with the gods, and the outer that between the Athenians and the Amazons. Every part of the gold was delicately worked: the edges of the sandals were engraved with the contests of the Centaurs and Lapithæ, and the base had many figures round it in relief. The eyes of the statue were marble, perhaps some inlaying of "pietra dura" to represent the colours of the iris and pupil. A still larger gold and ivory statue was made by Phidias of Jupiter for his temple at Olympia. This image was seated in a chair, and under the feet a footstool. A restoration has been attempted by Quatremère de Quincy in his "Jupiter Olympien." Another gold and ivory Jupiter was given in later times by Hadrian to his temple at Athens. An image of Bacchus of the same kind was kept in his temple in the street of tripods; and many others in various parts of Greece. Images in bronze, marble, and wood had details inlaid in more precious material; eyes of ivory, nails of silver, and the like.

The wish to imitate the example of devoting wealth and costly sculpture to these religious shrines was not confined to native Greeks but attracted royal devotees to well-known Greek sanctuaries. Crœsus, among many offerings of gold and silver to the shrine of Delphi, sent a golden statue of his favourite wife. Darius also erected to a favourite wife a statue of hammered gold. The fame of these gold and ivory statues so increased the desire to have them for temples in foreign countries that later sculptors in Athens made them in numbers expressly for exportation. Philostratus alludes to such statues as to be seen in many small temples which were properly and well kept up.

The gold portions of the chryselephantine statues were not cast but hammered. The metal on the statue of Minerva was made so as to be removable, and Phidias, when tried on the charges of impiety for having represented his own portrait and that of Pericles on the shield, and for that of embezzlement, was able to insist on the gold being weighed. How thick the metal

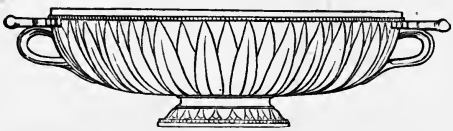
was can but be a matter of conjecture. Not less, probably, than the gold that covers the gold chair in the Indian museum: perhaps as thick as a shilling. The weight is variously estimated by ancient authors; it was about forty-four talents, nearly 118,000*l.* value of our money. The gold is said to have been robbed by Lachares B.C. 296; but Pausanias says he saw it entire four centuries later.

Not one of these statues survived the fourth century of our æra. The conversion of the empire to Christianity put an end to any remains of veneration in which these or any such statues had been held. The gold became state property, and was in part melted down to make vessels and utensils for the new worship.

The treasures of seven or eight centuries passed before the eyes of Pausanias when he made his famous journey through Greece in the second century. The gold and silver shields, spoils of the Persian wars, had been carried off from the Parthenon, but the colossal statues were all but entire. The Erectheum and the temples gathered round it still contained the stump of the sacred olive, the silver-footed throne of Xerxes, the golden-hilted sword of Mardonius, and the wrought and gilded (?) palm-tree overshadowing the lamp of gold with its wick of Carpasian linen, the light of which never went out. The temple of Jupiter at Olympia was uninjured, with the colossus, the chest, tables, wreaths, and precious objects already described: so were the treasuries of Altis and many others, and the sacred ship of Delos; not to speak of Delphi where there were 3,000 statues in different materials.

Unhappily our knowledge of ancient Greek art has been till recent years brought to us through the medium of what may be called a Roman translation. Apart from the jewellery dug up in various parts of Italy, the treasure of Cyprus, and a number of beautiful pieces of various kinds collected in St. Petersburg, not much of their goldsmiths' work remains. Gold

vases of ancient Greek workmanship are very rare. One or two shall be noticed presently. The silver, gold, or silver-gilt goldsmiths' work that is to be seen in modern collections has been mostly found in the excavations of Herculaneum, Pompeii, and Rome; one or two in France, and other countries in the north of Europe; and a number of beautiful pieces outside the walls of Hildesheim in Hanover. Most of these belong to imperial times.



CYLIX.—COPY IN SOUTH KENSINGTON MUSEUM.

Some accounts of well-known vases and other examples of old Greek gold and silver smiths have been preserved by Pliny the elder, and other writers. It is to be noted that though Phidias and his contemporaries made great statues of gold, many artists who devoted themselves mainly and altogether to working on the precious metals executed their best work in silver.

The ancient Greeks also worked in an alloyed metal to which they gave the name of *electrum*, and on which they set great store. It was gold with one fifth part of silver. This was found in some of the washings of the Italian rivers, and was considered of far higher value in this state of native alloy than when mixed in the furnace. The colour was whiter and more luminous than that of gold; and the metal was supposed to betray the presence of poison. It is difficult to understand the great estimation in which this *electrum* was held except, perhaps, that though gold is never found without some mixture of silver it is rarely procured in this particular proportion. A vase of *electrum* is preserved in the St. Petersburg museum: examples of such vases or ornaments are rare.

Among the names of the best known artists in silver or gold are the following.

The first place belongs to Mentor. His exact date is not known, but he must have lived in the time of the immediate successors of Phidias. Four pairs of his silver vases are said to have perished in the burning of the temple of Diana at Ephesus B.C. 356. Martial alludes to pieces of his work as still in the possession of a friend in Rome.

Mentor and his brother artists were embossers, chasers and engravers, *toreutores* and *cælatores*. The embossed work was beaten up or executed on bands of metal, and afterwards soldered on the outside of the vessels for which they were intended. These ornaments were figures, dramatic compositions, masks, goatskins, attributes of the theatre, offerings to Bacchus, or subjects of the chase. Gold inlay and gold beaten work were laid on vases *auro circumvincta*, but this was probably rare among the Greeks of the great time, and was common in Rome to please a more ostentatious society.

After Mentor come Acragas, of the age of Scopas and Praxiteles; and Mys, of the date of Phidias or his immediate successors. Stratonicus, of Athens, was of the third century B.C.; Tauriscus, of Cyzicus, flourished at the same time or soon after. Antipater, of unknown date, is named by Pliny as the maker of a bowl on which was a sleeping satyr, engraved so wonderfully as to seem laid on in relief. Eunichus of Mytelene and Hecatæus of the same place were of the time of Pompey. Zopyrus, of the same date, represented on two cups the trial of Orestes for the murder of Clytemnestra. These works were valued in Rome at 12,000 sesterces (say, 100*l.*), a modest sum compared with what will be mentioned presently. Pytheas was a generation later. He made a famous bowl embossed with a composition of figures representing Ulysses and Diomed stealing the Palladium. He engraved cups with subjects of domestic life, the execution of which was of such

extreme delicacy that they could not be moulded so as to obtain casts from them, nor were there artists in Pliny's time competent to copy them. Pasiteles, of the same date, chased and embossed in silver, particularly animals, and often from the life. Posidonius, of Ephesus, was another contemporary, whose compositions were of athletes, hunting scenes and sacrifices.

Speaking of the collections of precious vases in ancient Greece, Müller says "In those seats of royalty" (the cities of Macedonian rulers) "were made an unusual number of chased and embossed silver vessels." But the number of pieces of metal work representing the schools of which these great masters were the founders, which were extant in Rome in the first century of our era, was small. The exigencies of war had probably caused the sale or destruction of vast numbers. Existing examples of the Greek gold or silver smiths' work of a date earlier than that of the Roman empire are rare. There is in the British museum a gold *patera* or dish which has four bulls in low relief on the inside. A sceptre about twenty inches long in the same collection is of gold, covered all the way up with a network of filigree finishing with a small Corinthian capital, surmounted by an apple made of green glass secured by a gold pin that passes through it, and finished with a blossom and with leaves, all of beaten gold; a silver dish found at Rhodes, with cartouches on it, Etruscan work. Other sceptres, found at Kertch, are now in the Petersburg museum.

Amongst the remains of ancient Greek and Etruscan metal-work (not usually gold or silver) none show more admirable art than the mirrors, many of which are to be seen in modern collections, some cased in silver. The surface of these mirrors is usually an alloy of copper and *stannum* (tin?), the greater number of more ancient mirror cases being of bronze. According to Beckmann the *stannum* of Pliny is rather an alloy of tin and lead, "a sort of [very hard] pewter." Silver came gradually into use for the surfaces of mirrors alloyed with other metals,

and by degrees it was used almost pure. A layer of gold was sometimes added at the back to make the reflection clearer—utterly inexplicable to Beckmann, who suggests that a gold reflector might have been hung at an inclination to throw a light on a silver mirror fixed in the wall. Mirrors on a large scale were occasionally placed on the walls of temples. In that of Here in Arcadia a mirror was so placed as to give a distorted and ridiculous reflection; that is, it was spherical, was above the spectator, and magnified the head and shoulders out of all proportion to the rest of the body.

Gilding.

The Greeks, like the Egyptians, Ninevites, Hebrews, and other nations of antiquity, used gilding not only on metals (bronze particularly) but on wood and external masonry and marble sculpture. In the first case gold was laid on as an amalgam with mercury, and the latter metal afterwards evaporated by heat. In the other cases, gold leaf of a tolerable substance was laid on a prepared bed made of chalk, marble dust, or other compositions with animal size admirably tempered, as in modern water gilding. Bronze chariots, armour, arms, tripods; the ornaments on the pediments of temples, railings, gratings, and other architectural ornaments; sculptures in marble, wood, and most other materials were enriched by this beautiful method.

The art of chasing out lines or forms and inlaying a black composition called *nigellum* or niello was probably well known to the Greeks, but it shall be reserved for a later section. Enamel, a method of laying powdered glass of different colours over gold and other metals and then submitting the metal to the action of the furnace so as to fuse and unite the coloured glass to the surface of the metal, was known to the Greeks as to some other nations of antiquity. Possibly also to the Egyptians, but not till the time of the Ptolemies. The Greek artists were sparing in their use of enamel over gold. A few specimens,

one or two earrings in the British museum and others in the collection of signor Castellani, may be quoted. It was a kind of decoration introduced from the east, and used with splendour and effect by Byzantine artists when Asiatic and barbarous goldsmiths' work replaced the purer art of the Romans; art pure by comparison with that which came after it, but far below the standard of the ancient Greeks.

CHAPTER IV.

ROMAN GOLD AND SILVER WORK.

THE Romans were not a race of artists; but they were "*rerum domini*," lords of the world and the treasures of it. The Roman patrician was refined in his pleasures and tastes, often highly educated, and knew what good art was though he could not create it. Rich patricians and money makers were often collectors, went to sales, and paid enormous sums for old gold and silver plate made by famous artists. They did this often no doubt from ostentation and knew that they were getting 'money's worth,' but they gave prices that would astonish many modern buyers at Christie's and the hotel Drouot. Pliny the elder, for example, speaking of pieces of old plate by well known artists of ancient Greece, who have been named already, tells us that Lucius Crassus, the orator, gave 100,000 sesterces (say, from 800*l.* to 900*l.* sterling) for two goblets chased by Mentor; but only 6,000 (say, 50*l.*) *per pound* for a number of other pieces of less value. The cost of a pair of small silver dolphins bought by Caius Gracchus was 5,000 sesterces (say, 40*l.*) per pound weight; the bowl of Pytheas, on which was represented Ulysses and Diomed with the palladium, fetched 10,000 denarii (say, about 330*l.*) *per ounce.*

So much as to the value put on fine old gold and silver smiths' work by the Romans. During the first century of our era

there remained in the Greek cities artists second rate as compared with the great names of the past but of great skill. In copying or reproducing traditional designs these artist workmen were unsurpassed. They were the inheritors of all kinds of methods of fusing, damascening, in-laying, and tempering the metals used in founding, sculpture, and decoration, whether of statues, vases, or the decorative parts of costly furniture, the after-growth of a creative age. Rome was full of Greek artists and workmen, and whether they wrought in their native cities for exportation or settled in the luxurious capitals of the empire, the working of gold and silver, as of other materials used in the arts, was mostly in the hands of Greeks. Their skill and their servility were proverbial.

At the present time, however, objects made of gold or silver by the Romans or their Greek workmen are very rare. They have been destroyed long since for the value of the metal. A few vases have been found in Rome and other places: and one hundred silver vases at Pompeii, fourteen of which were in the house opposite that of Meleager.

Most of the old drinking vases were made of two plates of metal, the outer one hammered, embossed, or chased, or with all these methods of decoration; the inner skin smooth, both to add strength and to be easily cleaned. Some of the plates of the Pompeian cups are uninjured, and are still elastic from the closeness of the fibre caused by hammering, so that the metal has undergone no disintegration.

A beautiful cup was found at Antium and is, or was, kept in the Corsini collection. A vase with a representation of the apotheosis of Homer is in the Bourbon collection in Naples. Two vases have been found at Bernay in Normandy, on which are represented the death of Patroclus and the vengeance of Achilles. The South Kensington museum has a small vase of silver, No. 737, found in the sulphur baths of Vicarello, on which figures and animals are embossed; and a ring of silver,

part of a vase or pyxis, embossed with genii. A silver vase, the outer plate decorated with leaf-work, and part of a small box or pyxis with masks and animals round it, form part of the collection of the British museum.

No example made in the Augustan times is better suited to illustrate this period of late Greek art than the silver cup belonging to Sir William Drake. All the details of ornamentation are admirably designed, and a number of accessories, such as offerings on an altar or table in front of a small sylvan deity, are of extraordinary delicacy. These offerings are cups and vases of nine different shapes and sizes, most of them two handled, so that, with the vase itself, no less than ten of these shapes are recorded by it. A cup of about the same date is in the collection of Mr. C. Drury Fortnum.

Treasure of Hildesheim.

The South Kensington collection includes some casts of antique Roman silver plate of a good period, found in 1869 outside the city of Hildesheim in Hanover, and now in the museum of Berlin.

The best pieces are probably not later in date than the first century. They consist of a number of drinking vessels, some parcel-gilt; dishes, ladles, fragments of tripod or table stands, and handles of cups and vases. These treasures were found by German soldiers under the hill above the city while digging a trench and throwing up butts for rifle practice. At first the value of the fragments of metal was not suspected, but a more careful search disclosed a great number of different pieces, some richly decorated and inlaid. Copies made by Messrs. Cristofle of Paris are in the South Kensington museum. Amongst them are examples of most of the patterns of drinking cups used by the Greeks, and adopted from them by the Romans.

One vessel only is of Gothic or trans-Alpine design, and we

do not know how the whole came into their late hiding-place. It is not probable that they formed the religious treasure of a temple, being too obviously a table service with portions of candelabra stands, and various objects such as might have formed the camp service of a Roman commander. But the Romans had no hold on Hanover, nor permanent stations as far north as Hildesheim. Trajan's settlements were not carried far beyond the valley of the Rhine. It is possible that a treasure such as this given or bequeathed by, or captured from, one person (and that a Roman magnate) has been secreted by a German tributary or hostile chief who, in his turn, has been driven from his native land. The camp equipages of silver plate carried by Roman commanders were often of great splendour. Pompeius Paulinus, of Arles, named by Pliny as the son of a man of merely equestrian rank, carried 1,200 pounds weight of silver on a campaign. Compared with this the service about to be noticed is of very modest extent. The largest vessel is a vase of oval shape on a stand with handles; both stand and handles are small in proportion to the capacity of the vase, which follows an outline common on the old terra-cotta vases of the Greeks.

The names given by antiquaries to cups and other vessels are many, and are not easily to be classed with precision.

This large piece (just mentioned) is a κρατὴρ, *crater*, used for mixing wine with water, without which it was unmannerly to drink wine. The *crater* in the collection is covered with arabesque work of leaves, scrolls, cupids, sphinxes, in relief of great delicacy. Wine would have been ladled out of this vessel by means of a small cup called κνάθος, *cyathus*, or by an οἰνόχοη, *oenochoe*, a can or ladle the handle of which rose straight from the sides of the bowl and not at right angles as in punch ladles.

Another vessel, κύλιξ, *cylix*, of which a beautiful example will be seen in No. 312, was an open saucer with handles, through one of which a finger was passed so as to balance the

full *cylix* on the hand while drinking, not easy to the unpractised. To carry round wine in the *cyathus* and fill up for the guests was still less so; it was kept replenished by these ladles.

CYLIX OR PATERA.—COPY IN SOUTH KENSINGTON MUSEUM.

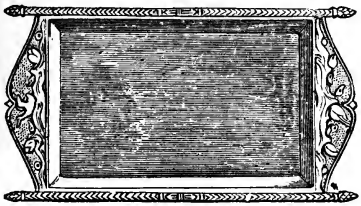
In this *cylix* the concave sides are relieved by a delicate frieze of Greek flower and scroll ornament of architectonic character; and a seated figure of Minerva in long drapery, helmeted and leaning on a shield in all but entire relief, fills half the capacity of the bowl, partly gilt. Such a bowl filled with wine, white or red, over the gilded sculpture would glow with a light not seen even in a topaz or carbuncle set upon foil; an effect well understood by goldsmiths and hosts who, whether Greek or Roman, loved to dazzle every sense of their guests. Another round drinking bowl contains a bust of the infant Hercules, much worn.

The καρχήσιον, *carchesium*, is of the form perhaps best translated goblet, rounded below, bell-mouthed, and contracted towards the middle, with or without handles. No. 321 is a beautiful example, the middle surrounded with a crown of bay leaves of gold. Such vases with gold wreaths or χρυσένδετα, *auro circumvincta*, answer to those specially noted by Pliny as an invention of the Greeks, and as representing the festive

garlands with which the guests and the cups were decked at a classic dinner. The πρόχους, *prochous*, was a jug or ewer, of which there is no example amongst the Hildesheim vessels. *Patera* is a name given to flat open saucers or bowls, of which there is a remarkable example, No. 323, round, engraved in the middle, with twelve egg-shaped hollows or smaller bowls along the sides; perhaps to hold eggs or balls of forcemeat. The κάνθαρος, *cantharus*, a drinking cup with high loop handles, was sacred to Bacchus. No. 317 is an example. Out of such a vessel a libation would be poured before beginning to drink. In this *cantharus* (and in No. 319) on the neck and on the lower body a goatskin, pairs of the thyrsus, scenic masks, and other ornaments, are raised in bold relief.

The σκύφος, *scyphus*, was sacred to Hercules. The ῥύτον, *rhyton*, was a vessel with a pointed bottom, in which was a hole through which wine trickled into another vessel or into the mouth when held over it. These vessels are often made like the head of a hart, a hind, or other animal, sometimes with a hole through the nose; they could not be set down when full, and resembled the drinking cups made of silver in the head of a fox and passed round to guests in this country a generation since; cups which must be emptied at a draught. The modern Spaniards still pour wine from small wine skins into the mouth through a narrow neck or hole, and tie up the neck or spout again after a reasonable supply. Other names of cups were κώθων, *cothon*, a cup of narrow neck with an elevation on the bottom of it; ἀρύβαλλος, *aryballus*, purse formed, narrowing upwards; κότυλη, *cotyle*, a small cup or pointed glass; φιάλη, *phiale*, a flat, shield-like goblet; ἀρύστικος, *arysticus*, a ladle. There are still other shades of difference in the shapes of vases, and the names are not easy to appropriate exactly. The true names of Greek vases have been the themes of learned treatises, into which it would be pedantic and wearisome to drag the reader.

The *lanx* is a flat, shallow dish, square or oblong. Nos. 334, 335, are *lances* elegantly ornamented, the sides strengthened by straight stems of metal, and the ends having projecting rims shaped into ogee and other curves: one with fish, water-fowls, and other objects worked on these portions in relief.

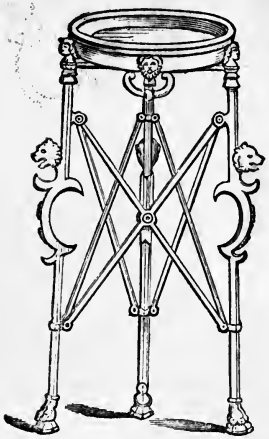


LANX.—COPY IN THE SOUTH KENSINGTON MUSEUM.

There are no spoons amongst this table plate. Three silver spoons are in the museum of Naples, two from Pompeii and the third from Herculaneum. The bowls of two of them come to a point, have a rib something like the 'rat tail' spoons, and the handles finish the one with a goat's foot, the other with a ball. The third spoon is more like the old salt spoons of the beginning of the last century; the last was called κοχλιάριον, *cochleare:* the pointed end of the handle being intended to draw snails (or periwinkles) from their shells.

The Hildesheim treasure illustrates the splendour with which the kitchen and the sitting rooms of the Roman house, even of the campaign tent, were furnished. The silver stewpans, Nos. 325, 326, are in size like those we now use, the handles elegantly worked into leaf-work ending in the necks and heads of geese or other aquatic fowls, where they clip round the edges of the pans. To these stewpans, dishes, plates, and cups for the actual preparation of food must be added the table and lamp supports, necessaries of the dining-room, of which fragments are included in the Hildesheim series. A *trapezophoron*, or table support, was usually made of marble, bronze, or, as here, of solid silver

In the former case it was the head, shoulders, and leg of a lion or leopard, such as can be seen among the casts of antique fragments in the museum. These heavy supports were placed under slabs of marble, but the lighter tables and sideboards were movable and made of precious woods. The lighter metal supports were frames of three legs, or of four, or six, connected by diagonal bars or braces. The braces were fixed, or could slide up and down, or could be folded together for transport. On this small movable stand the *mensa*, table or tray containing each course of a meal, was placed. The woodcut represents a bronze in the South Kensington museum: and the reader will find this kind of furniture described in my Introduction to the catalogue of furniture at South Kensington.



TRIPOD.

Rich vessels of certain shapes were kept for sacred uses by the Romans and belonged to the services of the temples. They may be seen sculptured on the bas-reliefs of the frieze of the temple formerly called that of Jupiter tonans in Rome, and on some fragments of a frieze from a temple of Neptune in Rome not a vestige of which now stands. The fragments are in the museum of the Capitol. Casts of both friezes are to be seen in the South Kensington museum.

Silver was used in Rome to decorate all kinds of furniture. Couches and seats had mounts, borders, friezes, and medallions of chased and embossed silver. The isle of Delos set the fashion in silver furniture, though couches and seats were enriched with silver after oriental or Carthaginian patterns also. Bronze furniture, such as chairs and beds, was damascened with silver and

gold; other pieces were of hammered metal so thick (probably over a core or framework of wood) as to be called solid silver. Roman chariots and harness of the rich were plated over with silver; and it is said of Poppea, wife of Nero, that her mule's hoofs were shod with gold. The use of the precious metals gradually invaded the more private rooms of the Roman house, and served for vessels of the vilest class. At first, indeed, luxury of this kind was considered vulgar or shameful, fit only for foreigners. According to the orator Messala, Antony, during his triumvirate, debased himself by compliance with such dissolute or effeminate ostentation.

But under the emperors gold and silver poured into Rome, and were worked wherever wealthy purchasers could be found to make use of them. Freedmen who had farmed the imperial revenues or made fortunes in trade rivalled the haughty patricians in splendour and outstripped them in display. A silver centre dish of 500 pounds weight with eight smaller, weighing 107 pounds each, were made in a foundry built expressly by one Drusillanus, a freedman of Servius. Solid gold and silver statues, and other sculpture properly so called, were also made in Rome but not often. Statues of themselves in silver, sometimes of gold, were carried in triumph by the emperors. Lucullus had a silver statue made.

Curious instances are on record of the display of the precious metals occasionally made by the Roman emperors. For instance; Cæsar, when ædile, plated the whole proscenium (or architectural framework of the stage front) of a theatre at the funeral games given in honour of his father. Caius Caligula had a piece of stage machinery erected in the amphitheatre to astonish the Roman public. This was apparently a contrivance which opened, closed, and adapted itself to various transformations, showing (we may conclude) something of a fairy temple or shrine of many scenes, plated with silver, not less than 124,000 pounds in weight. The emperor Nero covered the theatre of Pompey

with gold (gilding?) for a single day, called the "golden day," when he displayed it to Tiridates, king of Armenia.

After all that has been related of the show made by gold and silver among ancient nations the question will arise, how much gold did they really possess, and what proportion did it bear to the stores of these metals now actually to be found in the modern world? A far greater proportion, both of gold and silver, is now coined and in circulation than before or during the supremacy of the Roman power. How would the quantities then coined and hoarded compare with those of our own times? The problem has been tried by more than one modern writer, but the grounds for any decision that can be relied on are, of course, very far from sufficient.

The yearly revenue of king Solomon is stated in the Scriptures to have been 666 talents of gold alone (not reckoning silver, which would have been as much more). The gold talent of the Hebrews is valued at 1,290,000 grains troy: making somewhere over seven millions sterling (of gold alone). Other writers value this weight of gold at about 7,780,000*l.*, and again 3,646,350*l.* The money revenue of the Persians in the time of Darius was according to Herodotus 14,560 Euboic silver talents, over three millions sterling. Pliny mentions the quantities of gold and silver collected in the Roman treasury at certain periods as upwards of seventy millions sterling. How long the revenues of the eastern monarchs lasted at the high amount given by historians, whether for a year or two during the height of their power or during a considerable proportion of any one reign, we do not know. It is probable that there were great rises and falls in the abundance of gold and that the tide set first in one direction then in another, precious shields, images, vases, beds, and so forth, changing hands often, as the treasures do of collectors in our day. Even under the orderly government and unquestioned sovereignty of Rome it was a fluctuating quantity.

M. Otreschkoff gives the following figures as representing the

quantities of the precious metals in ancient times and during the middle ages, but we must consider them as greatly exaggerated.

The whole quantity of gold in use up to the beginning of our era was :—

Gold	7,491,333,332	francs.
Silver	13,148,666,668	

In round numbers about 300,000,000*l.* sterling in gold, and about 546,000,000*l.* sterling in silver. From the beginning of our era to the date of the discovery of South America about 938,000,000*l.* The gold of the ancients was less alloyed, softer than ours, and more of it was used in woven fabrics, ornaments, and jewellery. It therefore wasted faster than modern coined gold ; for this reason much has disappeared.

On the other hand turning to modern figures Dr. Linderman, director of the United States mint, estimates the stock of gold and silver now in use in the world at about 2,000,000,000*l.* sterling, and the present rate of production about one and a half per cent. on the existing stock. M. Victor Bonnet assumes the annual supply to be 20,000,000*l.*, allows 2,480,000*l.* for wear and tear of existing stocks, and 4,000,000*l.* for consumption in the arts, &c. A writer in Blackwood's magazine on money (October 1875) states that one sixth of the western store of precious metals is hidden away (probably in coin), that two sixths are in effective circulation, and that the immense proportion of one half is held in plate and ornaments.

How often has the gold of ancient times, continually wearing and wasting, been remelted with fresh metal? The gold that has been exchanged by the patriarchs, worshipped on idols, embossed on statues, vases, and armour, covered the sanctuary of Jerusalem, figured in triumphs, ministered to the foulest debaucheries, rung to the litanies of pilgrims on shrines and reliquaries; what has become of it? Is not some still passed from hand to hand stamped with the likeness of queens, kings,

and emperors of the present day? It has been mixed with the ores of a hundred mines, divided, circulated, added to on countless occasions all over the world; portions have figured in strange and terrible scenes to satisfy the old proverbial "sacra fames;" to furnish the reward of infamy, or the price of blood; and, again, in turn it has served good ends during the changes and vicissitudes of the history of men.

Decay of classic art.

After the close of the third century the loss of the old tradition of classic art was general, in gold and silver smiths' work no less than in the arts of casting and making sculpture on a larger scale. During the reign of Trajan the personal splendour and the household magnificence of the Roman patricians continued as in the first century. Perhaps the skill of metal workers in cups, vases, furniture, harness, and things that made up the tangible wealth of the great families, did not decline. From the death of Alexander Severus, in 235, begins that universal decay which brought the arts, carried to such excellence by the Greeks and by the Romans under their guidance, to an end. At what precise period we should place the break up of the great treasuries of Greek art described by Pausanias cannot be decided. The disorders and disunion of the empire under the successors of the Antonines, and again after the death of Alexander Severus, probably led to such insecurity of the provinces out of immediate reach of Rome that much which was of intrinsic value in the precious metals went to the crucible.

Little can be said as to the quantity of wrought gold and silver in the possession of the patrician families in the time of Constantine, or as to what sort of art was devoted to it. When the emperor entered Rome in triumph a golden chariot was provided for him. He made a golden coffin for himself. Of the skill of Roman artists in his day we judge by the robberies of bas-reliefs from the forum of Trajan which were

required to decorate his triumphal arch. It is not probable that the goldsmiths were much more skilful than the sculptors.

It has sometimes been said that the legal recognition of the Christian religion was the great reason of the decline of the arts which had hitherto been devoted to the shrines, temples, and altars of heathenism. It was a matter of popular rejoicing, no doubt, to make a show of the vanity and falsehood of the ancient oracles, shrines, and the "dusty inside of chryselephantine (gold and ivory) statues." But in Rome all remaining monuments were placed by the emperor under the charge of a special officer. Moreover, it was far from the intention of Constantine to discourage the art then to be found in Rome. He was about to give as great an impulse as his imperial rule could enable him to art of every kind. To him must be credited such a revival as set in under the protection, and mainly for the special service, of the new religion. Constantine built the great basilicas of S. John Lateran and the old S. Peter's in Rome, and besides encouraging religious art determined to build and adorn a new capital. It cannot therefore be said that Christianity killed the arts of antiquity. On the contrary, the most cursory examination of the catacombs shows that such modest ornamentation as could be placed with propriety over the altars of those sacred grottoes was carefully carried out before the conversion of the emperor. The paintings still remaining there are rude, but it was such art as was to be procured. The old art perished from other causes. When national character dwindles those qualities of mind and spirit which spring up amongst a cultivated society abounding in life and vigour die also. There must be strength, brightness, life, in any race if it is to give birth to that refined play which produces art. Only from a vast field of exuberant life can this kind of growth be expected. When such a field is no longer fruitful, and the soil exhausted, the highest produce of all cannot possibly be looked for. This is as true of modern

as it has proved of ancient times. The art of classic Greece and Rome died out from natural causes.

The art of the silversmiths of the late Roman empire can be illustrated by a number of existing vessels, caskets, and ornaments of silver of the highest interest, now in the British museum : and which were hidden in Rome for many centuries.

The most considerable in size and value is a chest, made to contain cosmetics and forming part of the toilet service of a Roman bride of the fourth century. It is 22 inches by 17 and 11 in height. It is shaped like a sarcophagus of that age, hammered up with portraits of the bride or bridegroom, and figures representing friends offering presents: the portraits are supported by genii, with Venus carried on hippocamps and marine monsters; a mixture of pagan and Christian subjects and of symbols of friendship and love. The design and execution are stiff and coarse, but the spirit of the composition recalls the old classic tradition still to be recognised though fast dying out. Another casket is round, domed over with flat panels and circular recesses along the sides. We seem to see in it the type of the reliquaries representing small churches or shrines with domed roofs, of which the South Kensington museum collection has one beautiful example, No. 7650. '61. The inscription on the principal object, giving the names of the married couple, contains a Christian blessing, VIVATIS IN CHRIS [TO] : otherwise the details are drawn from the old mythology.

A number of dishes, round *scutellæ* on low stands or rims, oblong *lances*, of old Roman form, and spoons with pointed handles of the old shape, are all signed with a monogram in niello. A set of horse trappings, *phaleræ*, such as were hung on the breastplates of horses in state equipments, consists of double shields and lion heads. There are, besides, four seated figures of the four great capital cities of the empire, Rome, Constantinople, Alexandria, and Antioch. These have square sockets attached to them and have been used to ornament the elastic shafts of a litter.

The bridal casket, vessels and pots to hold unguents, belong to the fourth century, subsequent to the time of Constantine and not earlier than 385—90. Visconti has given full accounts and plates representing this treasure, and was in Rome when they were discovered in the vaults of a house which had probably fallen in, and where they might have been hidden. He assigns to the later vessels and dishes a date agreeing with that of the casket and other bridal ornaments and toilet vessels, but the resemblance of the monograms to the letters on the coins of the Ostro-gothic kings suggests the end of the fifth or beginning of the sixth century as the probable time of deposit. Possibly the treasure may have been hidden on the taking of Rome by Totila in 546, or on its second capture by the same barbarian invader in 549. After its discovery in 1793 it was acquired by the father of the late duc de Blacas. From that collection it was purchased for the British museum in the year 1866.

CHAPTER V.

THE BYZANTINES.

THE next great period to be considered in the history of gold and silver work begins in the fourth century and continues to the eleventh. What remained of Roman power, majesty, and splendour was planted under new ideas and traditions at Constantinople. The art of this long series of years is called Byzantine.

It is not to be supposed that Byzantine art was practised only at Constantinople, nor entirely kept in the hands of Greek artists, for (on the contrary) much was done by the Roman pontiffs to enrich the basilicas or churches in the ancient capital. The seat and home of the old art, however, had been transferred to Constantinople. Constantine himself, though he did much to renew the splendour of Rome, carried away all the best artists to his new capital, where the riches and display of the imperial court and of the patrician families equalled, if they did not exceed, those of the old empire. The condition of Italy, and of the whole western empire, till the end of the tenth century was such that the arts and especially those employed on precious substances could with difficulty be cultivated. Wars, sieges, plunder, massacres, swept over the most beautiful countries and cities of Europe, desolating Italy and the rich and populous outlying provinces east, west, and south. The ancient

seats of learning, refinement and wealth, such as Antioch, Alexandria, and Carthage fared no better than Rome and the neighbourhood. Statues, vessels, and precious ornaments were swept away by barbarous conquerors, occasionally treasured up and recaptured, oftener melted into ingots and recast in barbarous forms or turned into rude personal ornaments.

There were times of ebb and flow in this course of destruction, but the periods of rest were not long enough to allow the disturbances of society to settle down, or codes of law and settled forms of social life to be re-established, far less for any school of art to grow to maturity. Most of the goldsmiths' work dating from the early centuries of the modern era is from the eastern empire. Constantinople and its many treasures stood unviolated till the age of the crusades.

But the art of the eastern empire was very inferior compared with that of classic Rome. Here and there designs on ivories, enamels, and goldsmiths' work are graceful and not wanting in dignity. The human figure, if conventional, is not always ill proportioned, and vegetable and animal life are often vigorous and racy though also conventional in treatment; but the art of Byzantium is scarcely the ghost of the old art of Rome; but a mere shadow, dull, feeble, and distorted. Still Constantinople was the heiress of what was left of Roman arts and resources, and this inheritance, though lowered, was a sort of representation of older and better forms. It handed down stiffened traditions through a long period of time till western Europe was once more possessed by powerful states in which the arts revived, and this of the goldsmith came into new life and works of incomparable beauty were produced. Nor, indeed, are Byzantine traditions wholly lost in Greece, Constantinople, and Russia to this day.

The outlines, composition, and details borrowed from antique architecture were much used in the larger Byzantine gold work, and in rolling acanthus scrollwork in beaten and chased

work on smaller things. The shapes and outlines are heavier, less graceful, and more complicated. Human figures no longer represented gods and goddesses, the images of natural strength and beauty, the pride or the passions of mankind. As the old religion had inspired the earlier art so did the solemnity of the Christian religion set its mark on the new. Its austerities, its strife with the world, its contempt of pleasure, its future hopes, all these found expression in the heads and bodies of prophets, apostles, and martyrs. Instead of the smoothness of face and roundness of limb of the Greek artists, those of Byzantium represented the wasted shapes of hermits, the sorrows of the mother of the Redeemer, and the mystery of the Cross. Thus their art, besides its technical shortcomings, was severe. But these solemn subjects were set off with the utmost magnificence, with hammered gold, with filigree, precious stones, and enamel. The splendour of material used in Byzantine art deserves special notice; and took the place of good designs and refined details, for which artists could no longer be found.

THE AGE OF JUSTINIAN.—The emperors who had embraced Christianity devoted their gold and jewels to enrich the basilicas and churches, their sanctuaries and altars: and to furnish them with richly covered books, chalices, censers, and other vessels for the services of religion and the solemn administration of the sacraments. The quantity of gold and silver devoted to these purposes was considerable. The details of the offerings made to the basilica of St. Peter's in Rome by pope Symmachus (498–514) are preserved in the pages of the "liber pontificalis." Not only was the high altar plated with silver but all the ornaments and utensils for the public service thereon were of gold and enriched with precious stones. Perhaps the Abyssinian chalice of massive gold now in the Kensington museum more nearly represents the shape of these early vessels than any others still in use.

The amount of the offerings by pope Symmachus, extracted by d'Agincourt from the "liber pontificalis," amounted to one

hundred and thirty pounds of gold and seven hundred of silver. But the splendour of the churches of Constantinople far exceeded this estimate under the reign of Justinian. No emperor

ABYSSINIAN CHALICE.

of Rome up to that period had the command of treasure in the precious metals in such abundance. The conquest of Belisarius brought to Constantinople an immense amount which had been taken from the western empire and lain preserved in Carthage and other strongholds of Africa. "The wealth of nations" Gibbon says "was displayed, the trophies of martial or effeminate luxury; rich armour, golden thrones, and the chariots of state which had been used by the Vandal queen; the mass of furniture of the royal banquet, the precious stones, statues and vases, the more substantial treasures of gold, and the holy vessels of the Jewish temple." Justinian removed and appropriated the column of Theodosius, which was of silver and weighed seven thousand four hundred pounds.

The church dedicated to the St. Sophia, the Divine Wisdom, a basilica in the style of those built by Constantine, was destroyed by the populace of Constantinople in consequence of the persecution of St. John Chrysostom. It was rebuilt by Justinian as we now see it. The crowning feature of the structure is the vast and shallow dome; and the altar was built in the choir

or recess that lies east of it, and is covered by a half-dome. The sanctuary was parted off by an arcade standing on a dado in the manner of the present chancel screen of St. Mark's in Venice. The lower part was made of gilt bronze, the pillars and architrave were plated with massive silver, with statues and tablets, engraved and filled in with images of saints in niello. The altar was a slab of marble plated over with gold set with precious stones and plates of enamel. It was supported on columns covered with massive plates of gold. Over the altar stretched a vast ciborium or canopy resting on four silver-gilt columns, vaulted with sheets of silver, decorated with figures in niello, and surmounted by a large mund or orb issuing from a nest of leaf-work on which stood a cross of massive gold set with precious stones, the most valuable that could be procured. The ambo, an inclosed pulpit, was placed outside the inclosure and was covered by a canopy lined with plates of gold and set with precious stones. The sanctuary contained forty thousand pounds weight of silver. The vessels used at the altar, and all movable ornaments applied to it, were of the purest gold set with the most valuable gems that were then probably to be found in the whole heritage of Greek and Roman antiquity.

A check was given to ecclesiastical art by the decrees of Leo the iconoclast in the eighth century. His hatred of images led to the destruction of many existing works of sculpture and vessels and utensils decorated with figures in enamel. Many artists were driven by these measures from Constantinople, and took refuge in Italy, Germany, and Gaul. Probably the schools of mosaic workers and of goldsmiths' work, gradually forming during intervals of peace under the protection of the popes, the Venetians, and the Gauls, received a new impulse from the emigration of artists and teachers that then took place.

Images were restored by Basil the Macedonian in the ninth century, and not only the images but ornaments of all kinds were again made for the churches of Constantinople (to

quote Labarte's words) "with incredible luxury; gold, silver, precious stones, and pearls were scattered about with a profusion which surpasses imagination." Leo the philosopher, and Constantine porphyrogenitus, his son, did their best to encourage the art of the goldsmiths during the tenth century, a time of terrible depression throughout western Europe. This skill continued through the eleventh and twelfth centuries.

The splendour of secular life corresponded to some extent with this prodigious application of gold to sacred uses.

The emperor Arcadius early in the fifth century sat on a throne of massive gold; his chariot was of gold; the two white mules that drew it had plates of beaten gold upon their harness. Gibbon tells us that "according to the description or rather invective of St. Chrysostom, an auction of Byzantine luxury must have been very productive. Every wealthy house possessed a semi-circular table of massive silver, such as two men could scarcely lift, a vase of solid gold of the weight of forty pounds, cups, dishes of the same metal." Theophilus (829) rebuilt the great palace of the emperors. The throne was of gold set with gems and was put on a terrace in a square, round which were distributed the public offices of the state. The long series of reception rooms was adapted to the seasons of the year, decorated with marble, porphyry, and mosaics, and with a profusion of gold, silver, and precious stones. The model of the palace was of oriental and Arab origin; it had been taken by one of his ambassadors from a palace lately built on the banks of the Tigris for the caliph of Bagdad.

The Greeks were the possessors of such principles of mechanical science as had been known by Archimedes, or by the Rhodians and others specially skilled in mechanism. In the ninth century this knowledge was applied by the emperors in the construction of costly toys, made to move and act by clockwork. The throne of Theophilus was overshadowed by a tree of gold, in the branches of which were birds of many kinds, and at

the foot two lions, all of gold. When ambassadors or potentates were entertained at great receptions the lions moved and roared, and the birds piped their proper notes. These curious contrivances point to the keenness of observation, and the spirit and vigour with which the artists of the early middle age represented animal life. The scroll compositions into which they arranged the bases of candlesticks, the borders, crestings, and reliefs of their reliquaries, and other metal work, abounded in representations of birds, dragons, and monsters, conventionally treated, so as to give due effect to the sinuous scrolls and knots in which the rich interlaced ornament was combined. This was a special feature in their goldsmith's and other metal work, and it took deep root in the early art of western and northern Europe. It prevailed till the twelfth century or later, and the same style is conspicuous in the rich design of the great candlestick of Milan, part of the base of which is given in the woodcut on the next page.

These treasures of gold and silver, precious stones, and enamels, so great in weight and quantity, so curiously contrived and wrought and of such enormous intrinsic value, remained substantially intact till 1204. In that year the French and Venetians stormed and sacked the imperial capital. A second siege ended in the pillage of the city, and the churches were stripped while the plate and treasure of the imperial palaces and private houses were confiscated to the captors. It is not probable that any of the gold and silver of St. Sophia, which was either fastened down or not light enough to be carried off and hidden, could have survived this fatal day.

Precious stones: niello, and enamel.

Precious stones.—Speaking generally, it may be stated that precious stones made no important feature of the ornamentation of goldsmith's work, whether Greek or Etruscan. Small stones, pearls, and crystals were used sometimes with pieces of glass

to give spots of colour where required, but they were not

BASE OF CANDLESTICK, MILAN CATHEDRAL.

probably to be had of such size, lustre, and water as to be of

any great intrinsic value; and precious stones have been in all ages the produce of Asia, of India, and the far, unknown, mysterious east. Their splendour, lustre, and value have always had a high place in the imagery of oriental poems and fables. It was from the east that the fleets of king Solomon and Hiram brought "precious stones." Precious stones were amongst the offerings of the queen of Sheba. They were articles of the commerce of Tyre, and are especially noted in the description of the vision of Ezekiel. "From India" says Layard "through Media, Hyrcania, and central Asia, various precious stones were probably supplied to Babylon and Nineveh."

Among the antique gold ornaments in the British museum from the Blacas collection there is a necklace set with beautiful Syrian carbuncles, the stones forming a rich interlaced knot; and small stones are found set on crowns, earrings, and small Greek jewellery, but coloured glass is as often used. If diamonds, emeralds, rubies, or pearls of great size, beauty, or perfection had been procurable by the Greeks they would have been used on the dresses, crowns, shields, and thrones of the great statues of Greece, and we should have heard of them in the description of the shrines and treasuries seen by Pausanias.

It was when art was on the decline that precious stones found their way to Rome. Stones of inferior value but of great beauty as to colour, the amethyst, sardonyx, onyx, carnelian, and other materials, were used by the late Greco-Roman artists for intaglios, cameos, and sculptured gems. Such gems, as well as crystals and precious stones, were to be had in great numbers by the Byzantine goldsmiths, and were set on the surfaces of reliquaries, crosses, and the covers of ecclesiastical books. Stones not figured or engraved were not cut into regular facets as modern stones are, but ground down with as much symmetry as the natural shapes of hard crystals would allow, and polished; commonly called by lapidaries "tallow cut," or in French

"en cabochon." Stones or pearls, however precious, do not make up for the beaten and chased work of antiquity, but they are set with advantage on the great surfaces of smooth or filigree gold which the Byzantine artists largely used.

NIELLO.—Besides precious stones the Byzantines used niello, a black composition made of silver, lead, sulphur, and copper. This material is powdered, and laid in lines or cavities prepared for it on a surface of silver; it is then passed through the furnace, where it is melted and incorporated with the solid metal. Niello has the effect of the black lines of an engraving, but the figures made with it are not liable to perish. It is mentioned in a letter to pope Leo III. as early as the beginning of the ninth century. Theophilus, who wrote in the twelfth century, gives exact directions for making it.

ENAMEL.—A more beautiful kind of decoration is that of enamel, a glassy substance of many brilliant colours, melted and united to gold, silver, bronze, copper, and other metals in the furnace. It has been added to gold and silver smith's work from the fourth to the seventeenth century; indeed, though with less skill and knowledge, it is in use in the present day. Enamel is nothing else than silicate (or glass) coloured by certain metallic oxides, and is put upon the surfaces of pottery and porcelain as well as on metal. It is broken up into powder, made into paste, and laid on gold, silver, or bronze, which is then passed through a furnace. From this stage of preparation it has been given the name of *smaltum.* In Italian, *smalto;* in French, *émail.* The glass is melted and adheres to the heated surface of the metal on which it is laid, so that the two are then permanently united.

So much has been done with enamel of different kinds, such beautiful examples are to be seen in many collections, and there has been so much written and said about it, that it deserves an entire treatise. The subject cannot be entirely passed over here, because the goldsmiths of Constantinople and those of western

Europe throughout the middle ages were more or less dependent on enamel for their most beautiful works.

True enamel being a kind of glass is coloured by the following substances; white by oxide of tin, which mineral is also added to make enamel of any colour opaque; blue by oxide of cobalt; red by gold; violet by manganese; green by copper. Other shades and colours have been used by the enamellers of France and the Rhine, and every guild, school, or family of artists has had special methods of its own both for colouring and using the material. The metal to be enamelled is placed under a bowl or cover pierced with holes and covered over with charcoal in a small furnace. Sometimes, no doubt, enamellers fused their material with the blow-pipe. It is essential that the glassy paste should be a certain time only under the fire, because the colours may change if kept too long, and must be withdrawn when just of the hue desired. Some colours fuse more easily than others and do not require so much heat. These are kept for the last. Those that stand the most heat are first fused, and they are put back as often as another colour remains to be added to the work. It need not be said that the regulation of the exact time of exposure to heat, as well as the making and mixing of materials, and the methods of applying them are only learnt by long experience and many failures. Artists have kept much of this knowledge as a personal or family secret, and this is still the case with certain fine kinds of enamel in India. The materials are simple and the outlines of the methods are easily told, but to use them so as to reach some measure of perfection in the working costs the devotion of a lifetime—perhaps of generations.

It has been said already, in treating of antique Greek work, that the artists of Greece were not ignorant of enamel, as may be seen by some earrings in the jewel-room of the British museum. But the Greeks used it very sparingly. They do not seem to have cared, according to signor Castellani, to cover gold surfaces with what they considered a common-place material. Pieces

of jewellery are occasionally found from which, judging from a glossy smoothness left on the metal, enamel has probably dropped off. Did the Greeks ever use vitreous pastes as solder? Signor Castellani says no. It has been made in the east and in the west, the south and north, of Europe; in the far east also of India and China; and the first discovery of the process is lost in what, for want of a better term, we are apt to call the mists of antiquity.

It is supposed by more than one writer that the Hebrew word *hashmal*, translated *electrum* and in the English amber (in the vision of Ezekiel) an expression or figure used to describe the splendour of golden or white light, means enamel, and that the art was known to the Hebrews. How long the art of enamelling has been known in China and India is worth careful inquiry; there are, perhaps, data for the search. Speaking broadly, it is of late invention as regards Europe. A passage of a letter written by Philostratus to Julia wife of Septimius Severus, at the beginning of the third century, says "They say that barbarians in the ocean (islanders or coast tribes) pour colouring matter on bronze that passes through the fire, and that by this means the colours are fixed and petrified, and that they preserve the figures they have designed (or painted) by this means."

The early date of a number of examples of Gallo-Roman and Gallo-British enamels favours the belief that the Gauls and Britons were among the earliest artists in this material, at any rate in the west: that from them enamels were obtained in Rome; and the art was developed and enlarged by the Byzantine goldsmiths, when Christianity became the religion of the state. Whatever the country may have been from which we first derived enamel it became of the greatest importance in Byzantine goldsmiths' work, and has been used continually down to our own times.

There are different kinds of enamel: 1, inlaid or encrusted; 2, transparent, showing designs on the metal under it; or, 3,

painted as a complete picture, which can be carried out with the fineness and delicacy of miniature painting.

The two first are what most concern the history of the goldsmith's art, but goldsmiths' work of a later date is sometimes decorated with the third kind, and occasionally with two of these varieties on the same piece. When enamel is encrusted the different parts of the figure or picture are drawn out by thin gold filigree bands or enclosures, which are soldered down on the surface of the metal to which the enamel is to be applied; and the enamelling matter or glass is laid into the various divisions so contrived. The burning is repeated with fresh material if the enamel is not equally thick in all parts, or if any of it does not completely fill the place prepared, and when cool the surface is rubbed down and polished. The metal generally enamelled by the Greeks is gold, which has to be very pure so that the thin bands may not melt. This is called by the French "*cloisonné*," from the small filigree bands or enclosures. Encrusted enamel is not always enclosed by filigree work. The metal to which it is applied often is of thickness sufficient to dig or hollow out cavities in it to hold the enamel. This method is called by the French "*champlevé*," because the ground of metal work is cut or dug away. In coarser and cheaper pieces vessels were often cast with these hollows ready provided. The fine enamels of the Byzantines are of the first of these varieties. The encrusted enamels made in Cologne or in other cities on the Rhine, those of the early Limoges manufacture, and the enamels of the Britons and Anglo-saxons were of the second kind. The fine Irish works have also enamel enclosed in gold filigree of the first kind. The enamel of this encrusted work is of considerable body, and more or less opaque.

The next kind of enamel to be noticed is transparent and laid over delicate engravings, generally on silver. The subjects are painted over with the colours required, which are then melted, care being taken not to let the colours run into each other. The

chasing and modelling of the silver are seen through the transparent medium, and this kind of work is of great delicacy and beauty. The French call it of "*bassetaille*," that is, enamelling over low reliefs. This enamel had its origin in Italy about the thirteenth century, and some of the most beautiful pieces of Italian goldsmiths' work have parts or points coloured by this method. It was carried to perfection by Cellini and his pupils and contemporaries.

The third kind, a mere painting on an enamelled copper surface, was the method used by the Limoges artists of the sixteenth century. These enamels do not come under notice in treating of the art of the goldsmith.

Beautiful transparent enamels are made at Pertabghur in India. They look like slices of emerald or sapphire laid in beds of gold, having tiny figures of beaten gold let into their surfaces. These enamels are made in that one place and by only two or three families, who keep their processes secret. Their only muffles are metal cups, and their furnace a hole in the earth in which they blow the fire up with the lungs.

The enamel of the Byzantines was very often made in jewels or small pieces and applied as precious stones are, by collets or by loops and flaps which simply joined the piece of enamel to the object to be decorated. In this way enamels were sent as presents and fastened to crowns, even to dresses and gloves, as in those of Charlemagne in the royal treasury at Vienna. They were often used on objects for which they had not been made. Many fine pieces, however, were complete in themselves. Unhappily, owing to the value of the pure gold of which so many of the finest examples of sacred vessels and royal ornaments, arms, and plate were made, very few Byzantine enamels can now be pointed out.

There is a fine example of goldsmiths' work, a crucifix, the cross of gold, mounted on cedar wood, with the evangelistic symbols in round medallions on the four arms of the cross,

numbered 7943 in the South Kensington collection. The letters of the title over the head are Latin and not Greek, but the fineness of the filigree and the extreme lustre and delicate working of the enamels seem beyond the reach of any but Greek workmen during the tenth century. The back is of pure gold, delicately beaten up. Another example of Byzantine goldsmiths' work in the same collection is a beautiful piece, No. 392. It is the cover of a small pyxis, perhaps a chrismatory, very delicately beaten, in a sort of architectural dome or lantern, and with half figures of animals looking out of holes or windows, only imperfectly illustrated in the accompanying woodcut. It is of beaten gold only and has no enamel.

COVER OF A PYX.

A few examples of known pieces of Constantinopolitan goldsmiths' work are preserved in the national library, Paris. Some of these have been presents, made expressly for and sent by the emperors to foreign kings and princes. The following are enumerated by Labarte:

1. The sword and various ornaments of dress found in the tomb of Childeric at Tournay in 1635. These are covered with filigree enamel. 2. An oblong dish of gold with a border of lozenges and trefoil ornaments on the angles. This piece was found near Gourdon in the Haute Saône, not long since, with gold coins of the emperor Anastasius I. (491—518) and Justin (518—527) which, however, do not prove the date of the dish though it must have been buried *later* than the last here given. 3. A MS. cover ornamented with enamel and precious stones, supposed to be not later than the eleventh century. 4. The cover of a book of the Gospels, the border of gold with double bands of pearls and tallow-cut stones. This is not earlier than the twelfth century.

A case for a missal or service book is preserved in the collection of the Louvre. It is in beaten work, having the

Crucifixion under an arch, and surrounded by a wide border containing cloisonné enamels. The evangelistic symbols are represented on the four corners. Another example in the Louvre is a plate of beaten gold, perhaps a book cover.

An enamelled cover of a gospel book is in the library at Munich. The frame is of gold with enamels imbedded in filigree of beautiful execution. It is the work of a Greek artist made probably in western Europe for the emperor Henry II.; early in the eleventh century. The crown of Hungary, kept in the castle of Buda, is a Byzantine work of the eleventh century, given by Michael Duras (1071—78) to Geysa I. (1047—77) but has additions of more modern date. The older part consists of a cylindrical band of pure gold. A few examples of crosses of Byzantine work are preserved in Germany. One at Essen set with precious stones, and said to be of the fourth century: a cross of gold set with precious stones, of the tenth century, in the treasury of St. Mauritz at Münster in Westphalia: another in the treasury of the Dom of the same city, but probably not earlier than the eleventh or twelfth century: and a cross of the ninth century in the treasury of the Dom of Hildesheim in Hanover, of silver, made to contain relics.

The treasure of Petrossa.

An interesting example of the art of the goldsmiths of the Gothic races who came under the influence of the Byzantines has lately come to light: consisting of a large number of vessels, apparently brought from Constantinople or one of the provincial capitals. The vessels are of pure gold and of great value: some are covered with beaten and chased work, others consist of a network of broad bands made to hold table-cut stones, crystals, and pastes. Some are set transparently, others over foil on a plate of gold. One deep patera of massive gold with figures in it is in the debased classic style so long maintained in Constantinople and the border provinces of the empire.

The "treasure of Petrossa" as the whole collection is called was found by peasants in 1837 on the banks of the river Argish, a tributary of the Danube, flowing south-east from the Carpathian mountains. The vessels were hidden by the finders, and afterwards mutilated, in order to avoid the rights of the government and the owner of the soil over treasure trove. Out of twenty-two separate pieces only twelve now remain. They were exhibited in the Paris exhibition of 1867, in the section of the *Histoire du travail*, and were afterwards lent to the South Kensington museum. They are now kept in the museum of antiquities at Bucharest. A selection only out of the twelve remaining pieces has been cast in electrotype for the museum.

Together with the beaten and inlaid vessels there was found a massive torque or Celtic collar of gold, made in a square rod or bar twisted and hooked at the two ends; an ornament common in Gaul and amongst the Celtic tribes in our own island long before the times of the Roman conquest. The vessels, of beaten gold, are 1. A massive round dish of great intrinsic value, cut into four pieces by the finders. All the pieces, fortunately, have been saved. 2. An ewer or wine vessel of elongated oval form with a broad flat lip, a flat foot, and a handle. The body is beaten up in spiral lines. These two pieces are of classical outline and the ornament is simple and well arranged. They are probably early in the fourth century. 3. A dish with a row of mythological figures. These three objects were made we suppose at Constantinople. 4. Two two-handled vases are made of slices of Syrian garnet and other precious stones set in massive reticulations of gold disposed in geometrical tracery. In one of these the handles, which are flat pierced plates projecting on a level with the lip of the vase, are supported by two gold leopards; the spots are represented upon them by carbuncles. Several brooches of large size are composed of stones also set in pure gold and lined with plates

of the same metal. These are in the form of the heads of birds; one represents the head and breast of a pheasant. A collar or gorget, part of a suit of ceremonial armour, is made of a plate of pure gold, and has had a mass of precious stones set in reticulated gold bands completely covering the surface. The great dish is valued at 1,000*l.*

The exact nationality of these treasures has been much disputed. The fine chains from which crystals and jewels are hung, and which are a characteristic feature in the brooches or breast ornaments, are twisted in the way common both to the old Greeks and to the Indian goldsmiths; little, therefore, can be deduced from this, but the hanging of jewels round crowns or head ornaments is part of the decoration of the crown of the empress Theodora, in the mosaic picture at Ravenna, a fac-simile of which is now in the South Kensington museum. The same ornament appears on the Gothic crowns of Guarrazar, now in the museum of the hotel de Cluny in Paris. It is probable that the Goths derived these ornaments from Constantinople. Mr. Soden Smith's conclusion is that they are the work of Byzantine artists, made for military officers or colonists who had to retire suddenly before some inroad of the Huns.

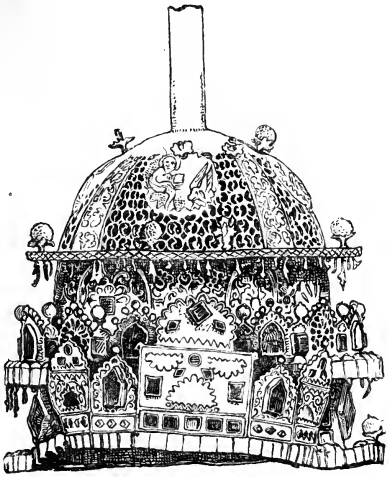
CHAPTER VI.

GOLD AND SILVER WORK IN WESTERN EUROPE OF BYZANTINE CHARACTER.

THE breaking up of the Roman empire and the convulsions through which Europe reached new life, firm governments, and well-ordered society, would have buried the very memory of the arts but for one protector, the Christian Church. Powerful tribes, Goths, Vandals, and Huns, passed like great waves of barbarism, destroying or carrying away the wealth of the old world; but the new religion, nearly co-extensive with the old empire, was everywhere at hand to comfort, to encourage, and to repair. It kept alive the ancient learning and, what is to our purpose here, it never ceased to encourage the arts, those especially that administered to the service of the sanctuary. Rome the ruined capital, besieged, sacked, and burnt, was never absolutely destroyed. It held within the broken circle of its walls the only power that could make itself felt in distant cities and capitals, or in what remained of them. The learning and cultivation which enjoyed the protection of the Roman pontiffs were encouraged and cared for in Milan, in Venice, in Gaul; in short, wherever Christian Churches were strong enough in the numbers and circumstances of the community to maintain their clergy and their ritual in decent independence.

As time went on the Roman pontiffs, the bishops of

other dioceses, exarchs, kings, and chiefs, borrowed models and teachers from Constantinople. Sometimes imperial gifts, such as altar fronts, crosses, reliquaries, or royal crowns, found their way to churches and courts from the Byzantine capital. They were objects on which a great value was set, and were received as motives for study and imitation: some of them are still kept as venerable monuments in church treasuries and among state regalia.



CROWN FROM ABYSSINIA.

The curious tiara in the woodcut was made for ecclesiastical use; brought from Abyssinia and not (probably) so ancient as the middle ages it represents the old oriental traditions preserved in distant provinces.

There were many schools of the goldsmith's art which followed more or less directly the teaching and example of Byzantium. Gaul, Spain, and Britain, including western Europe as far as the Rhine, were colonies and provinces of the Roman empire in the second century. Roman legions were quartered in those countries, troops were enrolled from them for the service of the empire.

Cities and villas were built in them protected by walls, such as London, Silchester, and York. The military colonists brought the arts of the imperial city; painting, sculpture, and architecture; the arts of making and working bronze had already been long established in both Gaul and Britain. Provincial life was an imitation of Roman manners, and provincial art could bear a comparison with that of the contemporary sculptors and painters in Rome.

The precious metals were rare in Gaul and in Britain, much more abundant in Spain, and found in moderate quantities in the sands of the Rhine and other large northern rivers. It is probable, therefore, that while metallurgy was carried to a higher perfection than sculpture it was employed on the founding and chasing of shields, arms, and personal ornaments, rather than statues of life size or on a smaller but still considerable scale, and that the colonies worked in bronze rather than in silver or gold. Still, though the Celtic and Gallo-Roman remains of enamelling are mostly executed on bronze these races were well acquainted with the art of gilding, and the precious metals were used on personal ornaments, horse trappings, and the mountings of arms. But these arts died out after the breaking up of the empire, and the loss of the security given while the power of the empire lasted or even the memory of that power; till at last they were swept away before the fury of hostile invasions. Few traces survived. Some sacred vessels and reliquaries, saved here and there in churches and sanctuaries where Christianity held its own, may have disposed the Franks and Saxons to receive again and to cultivate diligently the art of metallurgy as soon as more peaceful times were reached. But the art of working with grace and skill in the precious metals was a revived art. Very little could have remained of the schools of metal workers that grew up under the Roman dominion.

We have no Italian goldsmiths' work of the fifth or sixth centuries. The oldest examples now remaining are the treasures

of the cathedral of Monza: a box enclosing selections from the gospels; the cover of a copy of the gospels; and the celebrated iron crown of Monza. In the crown there is little of the goldsmith's art. It is a flat circle of gold between two and three inches wide, joined, and covered with precious stones in rows of three, one above the other, in plain settings. In the spaces between these rows are set single stones with six foiled flowers of gold. It is called the iron crown because of a thin circle of iron inside it, believed to be one of the nails of the Cross, and it is the traditional crown of the kings of Lombardy. It was given to the treasury of the cathedral by Theodolinda, queen of the Lombards, in 616. Another crown, that of Agilulph, of the end of the sixth or beginning of the seventh century, was for many ages included amongst these treasures. It was taken to Paris by the French, and stolen from the national library in 1804. A bass-relief from the cathedral of Monza (of which there is a cast in the Kensington museum) represents an imperial coronation, and these crowns are seen in the background of the composition.

France during the sixth and seventh centuries was less desolated by wars than Italy, many provinces lying out of the track of conquest. There the remains of the goldsmith's art survived. The ancient Roman traditions gathered fresh life from such examples of Byzantine workmanship as were obtained from time to time by princes and bishops. Abbo, the goldsmith and mint master of Clothaire the second, was the master of a pupil far better known who rose from the position of a goldsmith to the rank of a bishop; St. Eloi or Eligius, 588—659. He made crowns, chalices, and other ornaments for the church of St. Denis and others. He is the supposed author of the *fautueil* of Dagobert the first, a chair of bronze gilt now in the national library in Paris, and of many once celebrated golden reliquaries now no longer in existence. Most of the works of this kind which were of great intrinsic value were either melted down by Louis XV. during his German wars, or by

the revolutionary commissioners at the close of the last century.

Whether the enamels for the manufacture of which Limoges became the special seat some centuries later were made in that city as early as the seventh century or not, it was at Limoges that the best goldsmiths were established. In the abbey of Solignac founded by St. Eloi, near Limoges, the art of working metals for all utensils required for religious use or the decoration of churches was carefully encouraged under his patronage. From the seventh century the monasteries of Europe became schools of learning and of all arts and handicraft, from agriculture to architecture, sculpture, and painting, and especially of the art of the goldsmith and the spread of Christianity surrounded these homes of charity and peace with a reverence that became a general, if not an absolute, protection. In such institutions there was time for experiments in the arts and in manufacture, and for the results to be perfected and transmitted to successive ages of patient and unselfish pupils. Traditions and "rules of thumb," of such great value in the preparation and adjustment of materials and in processes of manufacture, were not lost for want of a continuity of pupils and successors.

Treasure of Guarrazar.

Very remarkable evidence of the state of goldsmiths' work in Spain in the seventh century was discovered a few years since. Towards the close of 1858 some peasants travelling near Toledo came upon a quantity of treasure of gold and precious stones, buried at a slight depth below the surface of the ground. They were attracted by the rich colour of the gold but had a very insufficient notion of the full value of what they had found. A speculator, better instructed, found out the secret and bought up the jewels, which had been taken to pieces and divided amongst the finders; having put them together completely he carried the whole treasure to Paris, where it was bought and

placed in the hôtel de Cluny. This treasure consists of eleven crowns of the purest gold, some set with precious stones, some hammered in relief; three crosses of the same style; an emerald rudely engraved with an Annunciation, and various fragments of hammered gold with chains fastened to them, by which they have been hung over an altar. The crowns are of different sizes. The largest is a jointed circle or belt of gold made of two thicknesses, the inner plate quite smooth, the outer doubled over on the top and bottom edges to hold two rims or borders of transparent glass pastes set in thin bands of gold like Greek enamels. The outer plate between these edges is thickly set with thirty large sapphires and thirty large pearls. The stones are "tallow cut" *i.e.* polished without facets. There are rings or hooks on the edge by which M. Du Sommerard, the curator of the museum, supposes a lining of silk or rich stuff has been fastened so that the crown could be worn. The most remarkable part of the ornamentation is a row of letters hung by fine gold chains to the lower edge, the letters spelling together the legend RECCESVINTHUS REX OFFERRET. From the letters hang small drop jewels pierced and attached by links of fine gold. The crown is hung by four chains, each link forming a sort of triangular lobed leaf inside a rim or border, all pierced. The chains unite in a jewel of rock crystal cut into the form of a rude capital to a column, and below this is a sort of flower composed of gold C-shaped leaves gathered into a graceful nest or blossom, and with jewels hanging from the points. Below the crown again hangs a cross set with large sapphires and pearls, and with pendants hung from the arms and from the foot of the cross. Another crown bears in letters the name of king Suinthila, 621–631.

One other crown, of the same kind but smaller and set with stones, may have been worn by a queen, a fourth is made in the same form. Three others are of open work of bars of gold intersecting each other in squares; with jewels at the several

VOTIVE CROWN OF KING SUINTHILA.

points of union, and also hung below them. From all these depend six crosses, less rich than the first described and made of flat surfaces of gold with small gems set on them. Three other crowns are smaller and are without hanging ornaments, but they are wrought with more skill; one is a colonnade or row of small arches; and the others have ornaments of hammered gold. The name of Reccesvinthus, 649—672, serves to fix a probable date to these crowns. They are most of them votive offerings, but one or two may have been actually used as ensigns of kingly dignity.

As in Monza with the iron crown so in Spain crowns were hung over the altar. Crowns had been a common form of offerings from the reign of Constantine in many countries of Europe, and the crown used for actual coronations was probably kept in some consecrated building or hung up in memory of that solemn ceremony. In Toledo, when the city fell into the hands of the Mahommedans "twenty-five diadems" were found in the cathedral "beautifully ornamented with jewels, one for each of the kings who had ruled over the country; since it was a custom amongst them for every monarch to deposit there before his death a crown of gold bearing an inscription indicative of his name, personal description, duration of life and reign, the children he had." The most remarkable ornaments of the Spanish crowns are the letters. The open network, as well as the jewels hung from the lower edges by fine chains, is like the jewels found at Petrossa, some of which have these chains and pierced appendages, and the intervening spaces filled in with pastes, sapphires, and garnets. The character of the work is Gothic. They are made after methods and traditions inherited it would seem from ancient Roman artists rather than from Byzantines, as enamel is not used though the appearance of that material is imitated in the slices of stone, jewels, and pastes set in the letters.

No one person did so much for putting courage and life

into the heart of the goldsmith as the emperor Charlemagne. He held under his sway the whole of continental Europe west of the Rhine and the Danube. He established the independence of the Roman pontiff, and within his vast dominions both gave and encouraged others to give abundantly to the founding or rebuilding of churches and furnishing them with costly vessels

CROWN OF CHARLEMAGNE.

of all kinds. He was crowned on the feast of the Nativity, in the year 800. He had no difficulty in finding workmen to make vessels and utensils in gold, silver, and bronze: some in the monasteries, and many secular artists had taken refuge in western Europe in consequence of the decrees of the iconoclasts

in the east. These had not only brought works of art but also carried with them their skill, their method of working, and their knowledge of design.

Amongst the jewels and ornaments made for his own personal use the imperial crown must be specially noticed, for it is still preserved amongst the regalia in Vienna. This crown is made of eight round-headed plates of gold, the largest nearly six inches high, jointed together. The larger are set with jewels in pierced openings, kept in place by gold claws, and the smaller with enamels, representing Solomon, David, the prophet Esaias before king Hezekiah, and our Lord between seraphim. These enamels are enclosed in filigree bands in the Greek manner, and the whole sunk into the metal plate. Portions of the crown are of a later time: a cross on the front and an arch from back to front, on which are the letters, CHOUONRADVS DEI GRATIA ROMANORVM IMPERATOR AUG, in pearls. The date of the coronation of Conrad III. 1138 brings this portion down to the twelfth century. The crown was probably crossed by a second arch, traces of which can be seen on the back of the side plates. It is kept at Vienna with other of the regalia of Charlemagne, such as the sword, sceptre, shoes, gloves, albe, and dalmatic. Before the wars of the French revolution they were preserved at Nuremburg and from thence sent to Frankfurt, or whatever other city might be chosen, for the coronation of an elected emperor.

It is probable that in the ninth century many utensils for the administration of religious offices and many of the ornaments of churches were of bronze gilt oftener than of gold or of silver. Those metals were probably reserved for what were held to be the most sacred uses, the cups of chalices, patens, and reliquaries. Nevertheless, Charlemagne was the possessor of greater wealth than any monarch of the west in his own age. No one since the fall of Rome so nearly represented the power of the emperors of the west. History records some few traces

of his personal magnificence in the matter of goldsmiths' work, besides the crown, sword, and other regalia. Among his treasures were a table of gold and three of silver, of large size and great weight. On one was traced or hammered the plan of the city of Constantinople, on another a view of Rome. The third was wrought with great delicacy; it was convex, perhaps in the shape of a round shield, and composed of three zones containing a description of the whole universe, figured in low relief or chasing. Such a piece of goldsmiths' work was probably of Constantinopolitan origin.

Charlemagne was buried, like the old Egyptian kings, with many of his treasures about him. His body was embalmed and seated on a throne of gold, clothed in his imperial robes; wearing a sword, of which the hilt and scabbard were of gold; with his sceptre and his shield of gold hung up before him; and a gold chain to which was fastened a relic of the true cross was wound round his head. These treasures were carried away by his successors about the twelfth century.

The early jewellery of the Saxons from the middle of the fifth century proves that they were skilful goldsmiths. Their jewels show (says Mr. Roach Smith) "in artistic merit in style and design, a closer relationship to classical or Roman art than those from other parts of the kingdom." With certain Teutonic features they retained traditions received from the colonists of Rome settled for many generations on our shores. Again, "in a grave at Sarre" (in Thanet) "was found a necklace composed of four gold coins (of the seventh century) and circular flat mosaic work set in gold"—*fibulæ*, a glass *bulla*, another of crystal, a perforated silver-gilt spoon set with garnets, and other precious objects. Once more: "The girdles of the Franks and Saxons of distinction were usually ornamented most profusely. Not only were the buckles often of the richest workmanship, and conspicuous for size and decoration, but they are sometimes supplemented by enchased plates, or plates set with precious stones."

Many pendants found in Saxon tombs of the sixth or even of the fifth century "are of elegant design and workmanship and must have decorated ladies of rank; made of gold and set with garnets and turquoises." Examples of these ornaments may be studied in the South Kensington museum. In 1828, about a hundred gold coins were found at Crondale, in Hampshire, with two jewelled clasps of a purse: "they cannot be later than the seventh century, and they were probably buried not very long subsequent to their mintage, which there is good reason to assign to London." Bronze had been well known and worked in Britain; so had enamel, generally embedded in massive metal and oftener in bronze than in gold. A fine vase or situla was dug up in Essex in 1834 in a Roman sepulchre, $4\frac{3}{4}$ in. diameter, $3\frac{3}{4}$ in. high, with a swing handle and bold scroll and leafwork, in green, red, and blue enamel, round the body. The ring of king Ethelwulf bearing his name, of gold with dark blue-black enamel and considered by M. De Laborde to be certainly of Saxon workmanship, dates from the eighth century. It was found at Laverstock in Hampshire and is now in the British museum.

During most of the eighth century Alcuin was living (735—804) whose learning and accomplishments gave him a name and a power that reached half over Europe. He was the friend and adviser of Charlemagne, and went to Parma to confer with that monarch on questions connected with the advancement of skill in the art of the goldsmith and all other arts employed in the services of religion. He was the founder of many monasteries, then quite as much seats of learning and nurseries of art in the northern provinces of England as in Paris, Tours, and elsewhere on the continent. While the germs of future universities, Oxford, or Paris or Tours, were laid in solid learning, the building of churches and the making of ecclesiastical utensils, crosses, shrines, and reliquaries were amply cared for by Alcuin and his contemporary prelates.

Passing on to the ninth century, we have evidence of the

goldsmiths' art under Alfred, 871—900. He visited Rome in his youth, and had the first elements of sacred and profane learning from the mother city under pope Leo IV. Of what shape the chalices, patens, censers, crosses, and other ecclesiastical utensils might have been in Alfred's day there remains no evidence. They were designed by the clergy, and probably after forms and types at use in Rome. The jewel preserved in the Ashmolean museum in Oxford is of more definite authority. This remarkable object was found at Athelney, in Somersetshire, whither Alfred retired 878. It is of gold richly wrought, with filigree, chasing, and engraving. The face is formed by a piece of rock crystal, four-tenths of an inch thick, under which are figures supposed to represent our Saviour, St. Neot, St. Cuthbert, or Alfred himself. The design is traced in lines of filigree attached to a plate of gold, and the spaces filled up with enamel of Greek character. The jewel has a broad rounded end, and finishes in a point on the opposite or upper end formed by the head of an animal. Round the edge runs a legend cut in bold characters : × AELFRED MEC HEHT GEVVR CAN (Alfred ordered me to be wrought). The intervening spaces are pierced to show the rock crystal within.

A remarkable example of the Italian art of the ninth century still exists at Milan; the golden altar of St. Ambrose in the church dedicated to him. It stands under a ciborium or canopy, supported by four pointed arches resting on four columns. The front, called the *palliotto*, was executed by an artist named Wolvinus, in 835.

This front is entirely of gold and is divided by a border of enamel into three divisions. The middle division contains a cross of four equal arms making five sub-divisions, formed by strips or borders of enamel set at intervals with tallow-cut precious stones. The middle division contains our Saviour in Majesty, the four arms the evangelists; and the square panels between these have the twelve apostles in sets of three to each

square, hammered up in relief. The two divisions on each side of the cross contain six compositions representing scenes from the life of our Lord, framed in by borders of like kind to those described. The two ends of the altar are of silver with gold decorations, and covered by large crosses marked out in the same way as the divisions in front. The back is of silver with enrichments of gold, and divided into three similar large panels. In the side panels there are twelve compositions representing the election of St. Ambrose to the see of Milan, and other acts of his life. The middle contains four medallions, in one of which the saint is shown receiving the golden altar from the founder, and in the other giving his benediction to the artist with the legend: WOLVINVS MAGISTER PHABER.

In France during this century Angelelme, bishop of Auxerre (813—828), gave to the church of St. Stephen silver altar tables (coverings), three crowns, and ten silver candlesticks, as well as a very large cross and the face of our Saviour in gold. Abbo left by will the means to overlay the high altar with gold and precious stones; and Vala (879) offered to the cathedral gold and silver vessels and many precious ornaments. Hincmar, bishop of Rheims, enclosed the relics of St. Remi in a shrine of silver decorated with twelve images of bishops, his predecessors.

The tenth century was a period of general depression throughout Europe. An expectation, widely spread, hung over the western church as the century closed in that the world would come to an end in the year 1000. The fields remained uncultivated, and industry of all kinds was kept to the provision of what was necessary for the mere sustentation of life. On the other hand, rapine and destruction were more violent and more absolutely desperate from this prevailing dread; famine and plague followed, and desolated whole provinces. Nevertheless, the making of gold and silver vessels and the necessary utensils for divine worship in churches and monasteries was not absolutely discontinued. Some of the larger monasteries protected by the fortified cities of France

and Italy maintained their art traditions. For instance, Gaudry and Guy, bishops of Auxerre, made offerings of rich goldsmiths' work to the cathedral of that see. Du Sommerard gives the date of a golden altar more than nine feet long, with figures of our Lord and the four evangelists hammered up in relief, given to the cathedral of Sens by archbishop Sévin or Séguin at the very close of the century 999. Unfortunately, this piece was one of many other treasures sacrificed to the exigencies of the seven years' war. The republic of Venice gave the order under Pietro Orfeolo the doge for the great *pala d'oro*, the gold and enamelled altar of St. Mark's, in 976. It was made at Constantinople, and was in fact the work rather of the eleventh than the tenth century.

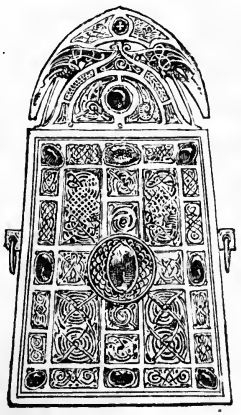
Generally the age was barren in what concerns our present inquiry.

Irish Celtic work.

From this dearth of goldsmiths' work on the continent of Europe in the tenth century we turn to the most distant of the European islands.

In all probability gold was the metal with which the primitive inhabitants of Ireland were first acquainted. A greater number and variety of golden jewels have been discovered in this than in any other country in north-western Europe. Records of discoveries can be traced through all the books relating to the archæology and history of Ireland during the last two hundred years. They are principally personal ornaments for the head, neck, breast, limbs, chest, waist, &c. The collections, however, though well represented in Irish academies and in private collections, are but a small portion of antiquities found in Ireland even within the past century; the great bulk having been melted down. The present goldsmiths and jewellers of Ireland bear testimony to the large quantities of antique articles of gold which have been consigned to the crucible. Some silversmiths estimate that they have purchased as much as 10,000*l.* worth for breaking up.

In the ninth and tenth centuries the goldsmiths of Ireland produced brooches and personal ornaments, chalices, covers for books of the gospels, reliquaries, croziers, and other objects of religious use, unsurpassed in the rest of Europe. Numerous examples remain to bear witness of this excellence. Some are made of bronze in varieties of alloy, set with jewels, pastes, and enamel, and with circles or spaces filled in with a filigree of extraordinary richness. This kind of ornament is plaited, twisted, and interlaced, and each thread or component member of the complicated ornaments is worked out through a number of turns difficult to follow with the eye, beginning and ending with some kind of animal head and tail, as in St. Patrick's bell, a cast of which is in the South Kensington museum.



THE BELL OF ST. PATRICK.

The most beautiful and perfect example of earlier date than the eleventh and twelfth century is the cup found at Ardagh, near Limerick. The material is silver alloyed with one third part of copper. It is a two-handled chalice, the surface of a low white colour and decorated with bands of pierced, plaited, and filigree

gold, as well as with enamels and pastes. It has more kinds of ornament and each kind more varied than any example of the same early period to which reference can be made. The bowl is plain except for an inscription containing the names of the apostles, almost as they stand in the commemoration in the canon of the Roman missal. These names are engraved with the hammer and chisel, and still show a slight turning up of the metal at the end of each chiselling. The ornaments applied on the surface are belts and handles, to which are attached plates composed of little compartments of the finest gold plaitwork. These are as fine on the under or inner surface of the foot as on the bowl or cup. Crystals and pastes as well as bosses of enamel are distributed at centres, points of junction, on the handles, and wherever they can be effectively set. Of the gold wire work forty varieties of design have been enumerated, some being the Greek fret with Celtic varieties; spiral trumpet-shaped lines, interlaced bands, knots, and arabesques; all different. Besides this delicate work there are bosses, and on the handles flat compartments of enamel alternating with gold fretwork. The enamel moreover is of several varieties, mostly opaque and bedded in depressions, but under the foot completely translucent, fired over wrought silver in the manner of the Italian work of the fourteenth century; in some instances two or three thicknesses of enamel are fired one upon, or within, the other. There are also small portions into which gold beads or planes have been inserted and united by firing. Amber has also been set round portions of the enamel, traces of which remain. The workmanship is certainly unsurpassed by that of any example remaining to us of the Byzantine goldsmiths or enamellers of the same period.

"The ornamental designs on this cup" says Lord Dunraven "belong to the Celtic school of art which, according to Dr. Petrie, reached its highest perfection as regards metallurgy in this country in the tenth and eleventh centuries." The great variety

of the enamelling seems to point to a familiarity with the methods of working the material that must have been long established in Ireland as in England. Possibly this art was pushed westward by the pressure of invasions on the great monastic establishments, first to the western coasts and islands then across the sea. There was frequent intercourse between the monasteries of the west; but whatever might be owing to teaching spread by this means Ireland must have had an immemorial Celtic tradition both of the goldsmith's art and of that of the enameller.

Before noticing the change of style that came in with the eleventh century, something must be said of one of the most beautiful monuments of mediæval goldsmiths' work remaining in Europe. The *pala d'oro,* to which allusion has before been made, is an oblong of about ten feet four inches by six feet nine or ten inches. It is surrounded by borders set with jewels and medallions, and divided by little arches or square panels into eighty-three pictures inlaid on a ground of gold. All the dividing members, spandrils, and spare spaces, are covered with jewels, pearls, and small medallions of enamel, and among them are two antique cameos. The enamel is encrusted on metal, the colours separated by fine lines of filigree gold. The entire composition is divided into two unequal portions. The upper contains a quatrefoil medallion intersected by a square in which is a figure of the archangel Michael, partly in relief. Three round arches stretch out on each side, containing enamelled pictures of the crucifixion, the harrowing of hell, the entry into Jerusalem; and of the ascension, descent of the Holy Spirit, and burial of the blessed Virgin; round these arches are considerable spaces filled in by flowing scroll work, with busts and figures in enamel, and with jewels and precious stones. The lower part is divided into a square centre in which are circular medallions, and three rows of figures on each side, each containing six single figures. In the large medallion our Lord is seated in majesty with the four evangelists round Him. Below Him are three figures under

arches: the blessed Virgin, the empress Irene, and the doge in whose time, 1106, the altar was completed and put to its present use. The eighteen figures on each side are angels, apostles, and prophets. Twenty-seven small square pictures, representing scenes in the Gospel history, form an outer range above and on the two sides of these wider sub-divisions.

CHAPTER VII.

GOLD AND SILVER WORK IN THE ELEVENTH AND TWELFTH CENTURIES.

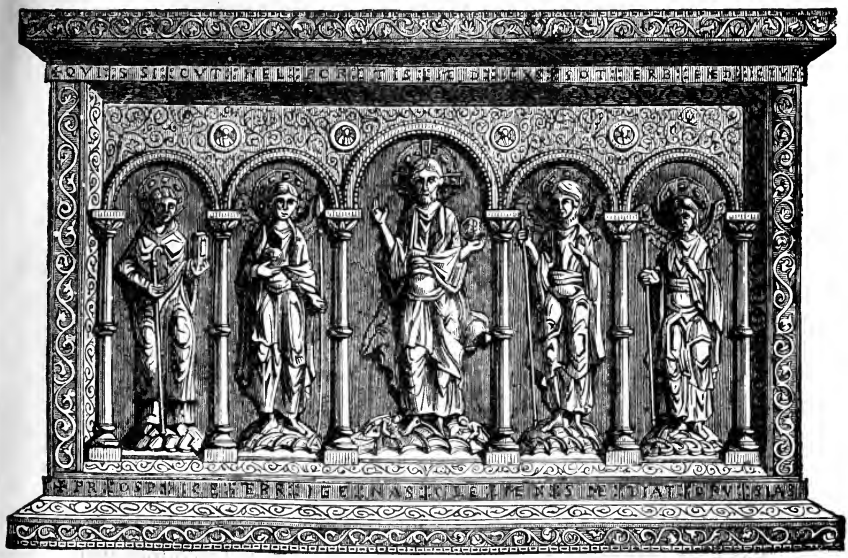
ALL Europe woke up to fresh life when the eleventh century fairly began. Artists no longer followed timidly such ideas as they had borrowed from the Byzantines, and the west introduced a style of its own. Families of monks, generally Benedictines or offshoots of that order, animated by one spirit and educated in one and the same way, were planted in monasteries north, south, east, and west. They built, adorned their churches, hammered, chased, and enamelled gold, silver, and bronze, nearly in the same style. Altar fronts, pyxes, lamps, patens, chalices, crosses, candlesticks, and reliquaries during two centuries, though in great varieties, were all designed after common and general types and ideas. Travelling, the visiting of monasteries, the change of inmates from one to another, the resort of vast numbers to Rome, the common interest in the crusades, made painters, sculptors, and metal workers, of one mind though often working far apart. The great abbeys of Ely and St. Alban in England; of Auxerre, Tours, St. Denis, and others in France; of St. Gall, Richenau, and Fulda in Germany; of monte Cassino and Subiaco in Italy, as well as a hundred others, were schools of ecclesiastical goldsmiths. Most of their motives of design, methods of working, and chemical processes were common property.

The goldsmiths' art borrowed much from the architecture of the time. The system of domes and vaulted roofs, the multiplication of small arches, arcades, and coupled window openings, the mouldings and masses of sculptured decoration which belong to the Norman or Lombard style furnished models. Many of these churches and shrines were planted in forests and wastes. The neighbourhood of lawless men, of wild beasts, of solitudes haunted by the remembrance of heathen worship, all tended to fill the minds of artists with visions of the strife waged by the spirit against the powers of darkness. Sculptors and metal workers twined stalks and leaves round their columns and candlesticks, planted stately columns, the emblems of divine majesty and truth, on the backs of lions and monsters, and delighted to represent the Christian soldier struggling with serpents and dragons in and out of the graceful scrolls into which they plaited the ivy, the thistle, and the vine.

Enamel, introduced from Constantinople, came into general use in Italy. Cicognara speaks of the presents sent by Greek emperors and the necessity of sending to Constantinople for workmen as causes of this Byzantine influence in Venice; a city which had more communication through its maritime trade with Constantinople than any other state in Europe. The German emperors became familiar with the art of enamelling and with the gold and silver smiths' work of Constantinople, after the marriage of Otho III. with the princess Theophania, 972. At a time when kings, bishops, and abbots were renewing the splendour of their churches and of the divine offices the services of Greek masters were eagerly sought for, and they were kept well employed.

A golden altar front formerly given by the emperor Henry II. (1003–1024) to the cathedral of Basle is now in the musée de Cluny in Paris. It is between five and six feet wide. The principal part is a colonnade resting on belted columns with capitals of Byzantine character. Under the arches are images

hammered up, in relief, of the Saviour and the three archangels Gabriel, Raphael, and Michael, with St. Benedict. The emperor



GOLDEN ALTAR FRONT FROM BASLE.

and his empress, St. Cunegunda, are represented on a very small scale prostrate at the feet of our Lord.

A school of goldsmiths who produced beaten work, chasing, gem setting, and founding in massive metal, was in great activity during the eleventh century at Hildesheim in Hanover. Bishop Bernward (992–1022) was one of the monastic artists who had been taught within the walls of his abbey. Casts of candlesticks executed in alloyed metal (electrum?) by him are now in the Kensington museum. A crucifix of gold set with stones and a chalice set with antique cameos and gems, by his hand but with some later alterations, are preserved in the treasury of the cathedral of Hildesheim. Large coronas or circles of light were

made by his scholars and by Hezilo, the successor of St. Bernward, for the choir and the nave of his cathedral. Parts of these circles were silver-gilt pierced and chased in a series of patterns, arcades, and rolling scrolls of leaf work, with twelve large towers each containing four images and representing the circuit of the heavenly Jerusalem, and twelve smaller niches with images of the apostles in silver. The silver images were plundered during the religious wars of the sixteenth century, but the rich and beautiful chandeliers, partially restored, are still *in situ*. A cast of one of them is in the Kensington museum.

Italy, which had suffered so heavily in the tenth century, made great efforts to furnish her churches with goldsmiths' work in the eleventh. The great Benedictine monastery of monte Cassino, the mother house of the order, encouraged and protected by the Roman pontiffs, was active in obtaining examples from Constantinople and in promoting metal work within the walls. The abbot in 1058 bought in Constantinople a number of precious objects, the most important of which was an altar front enamelled with compositions representing the acts of St. Benedict. The other great Benedictine abbey of Subiaco followed this example. John the thirty-second abbot, in the year 1090, made an image of gold and silver of admirable workmanship, a chalice and other precious objects, such as vessels for the church, candelabra, repositories for the sacred books, &c.

Turning homewards to our own country we find Brithnodus abbot of Ely, among the known artists of his time. Four images by him covered with silver-gilt and precious stones were stripped to appease the resentment of William the conqueror. Leo, a contemporary, worked after his teaching. Elsinus, his successor, made a reliquary for the bones of St. Windreda. The abbey was able to offer William a thousand marks obtained by the sacrifice of gold and silver ornaments of the cathedral after the resistance made in the island by the Saxons. Two remarkable reliquaries of the eleventh century covered with images of gold, the work of

Richard fifteenth abbot of St. Alban's, are mentioned by Matthew Paris along with other examples of his skill as a goldsmith.

The early skill of the Spanish goldsmiths has been illustrated by the treasure of Guarrazar, described above. We will now quote from Mr. Juan Riaño's notices of the goldsmiths of Spain during the succeeding centuries. "Spanish goldsmiths' work continued, after the invasion of the Arabs, to give signs of life among the Christian population. We are led to suppose this from the number of jewels and donations of all kinds made to the different churches. The most remarkable belonging to this period are two crosses, preserved in the Camara santa of Oviedo, the *Cruz de los Angelos*, of gold plates with filigree and antique and other jewels. At the back of these is an inscription, 'Ofert Aldefonsus humilis servus Christi,' and the date 808. The *Cruz de la Victoria* is of wood, like the other, plated with gold and set with gems. It was made in 908. *The Arca Santa*, a casket to contain relics, kept in the same treasury, is of wood covered with plates of silver with remains of gilding. The ornamentation of part belongs to the seventh century and the rest to the end of the eleventh. In speaking of goldsmiths' and silversmiths' work of the eleventh century it is necessary to mention the magnificent high altar of the cathedral of Gerona in Cataluña. This altar is of alabaster and is covered on three sides with silver plates fastened on wooden boards, while in front the plates are of gold. It is decorated with figures in relief, representing subjects from the life of our Lord, the blessed Virgin, and saints. In the centre towards the bottom there is a female sphinx on green enamel, with the legend *jussit fieri Guisla Comitissa* (who died 1035). Between the figures and borders precious stones are set, some of them antique. The retable over the altar is also of silver plates with figures and religious subjects, made in the fourteenth century by Pedro Benes, or Barners, a silversmith of Valencia."

Moorish artists maintained their celebrity throughout the

middle ages in Spain. "In the fifteenth century the Spanish Moors made admirable chiselled, enamelled, and gilt work, and applied filigree work on the surface, a system kept up at Salamanca and Cordova to the present day."

The twelfth century was fruitful in the production of large and costly pieces of goldsmiths' work; of every kind of vessel for ecclesiastical use, and much fine metal work for civil and domestic purposes. Some vessels for the most sacred uses of religion and for relics of the highest title to veneration were made actually in gold. Others were of silver gilt; or portions of them, such as the cups of chalices, while the stems and feet were of bronze, as were many pyxes, ciboria and portable altars. Reliquaries of smaller importance and vessels made for domestic use were of copper gilt; of bronze; or of various alloys of copper and tin, sometimes with small quantities of iron and other metals. The South Kensington museum is provided with examples of many kinds illustrating the materials and the skill of this time. The largest and most sumptuous pieces of goldsmiths' work of the twelfth century next to golden and silver altars, already noticed, were the reliquaries. The "great relics" brought by St. Louis to Paris; those of Treves; of Cologne; of Aix-la-Chapelle, and other well-known shrines were enclosed in costly coffers. Smaller relics, specially particles of the wood of the Cross, were generally enclosed in crosses of gold or of silver-gilt and set with gems and precious stones; often, as may be seen still, with antique intaglios taken from family jewels and devoted to this sacred purpose.

PORTABLE ALTAR.—
SOUTH KENSINGTON MUSEUM.

Chasses or sarcophagus-shaped reliquaries of six or seven feet in length were made to hold the bodies of martyrs and saints. Bones or parts of the body of a saint were enclosed in reliquaries of less size, sometimes shaped like shrines or churches,

sometimes like heads, busts, arms, hands, feet, according to the bones they were meant to contain. Several of great beauty will be seen in the Kensington museum. One, from the Soltikoff collection, is a small church the shape of a cross covered by a dome, and the base of the dome divided into twelve niches. The shrine itself is of gilt bronze elaborately decorated with enamel embedded in the metal. It is said to have been made in one of the monasteries of Cologne.

In such pieces of German goldsmiths' work the material is rarely of the precious metals which accounts, perhaps, for their preservation: to this we may add the deep-seated love of ancient traditions so general among German people.

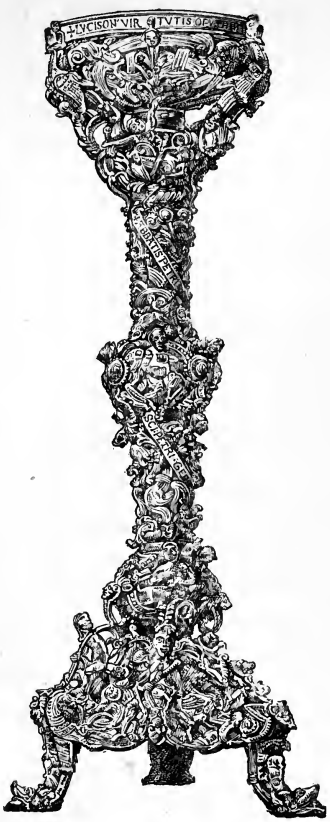
Small pieces, however, such as those in the South Kensington museum though rich and beautiful as examples of enamel, give but an imperfect notion of the splendour of the great reliquaries or shrines made from the twelfth to the sixteenth century, some few of which are still remaining. The shrine containing the skulls of the three kings in the cathedral of Cologne, well known to modern travellers, was begun towards the end of the century (1190). It carries out the tradition of an ancient sarcophagus, a little house in this instance in two storeys, the lower projecting beyond the upper, and enlarged into a small church or shrine. Round the lower storey runs an arcade of trefoiled arches, and another of round arches along the sides of the upper. These arches are cut out of plates of solid metal. Under them stand figures of prophets and apostles and, on the end, compositions representing the blessed Virgin and the holy Child; the adoration of the magi, with the emperor Otho IV., and the baptism of our Saviour. These compositions are hammered in relief and are of solid gold. The cornice bands round the structure are of gold, and the other architectural details covered with enamels and precious stones. The cover or upper part is of silver-gilt. The skulls of the three wise men, visible through a grating, are covered with gilt copper crowns which have replaced the original crowns.

The names Gaspar, Melchior, and Balthazar, are in rubies. The length of the shrine is about 5 feet 6 inches by 5 feet high and 3 wide. It was removed during the wars of the French revolution to Arnsberg in Westphalia, and some of the jewels were then sold to supply the necessities of the chapter; these have been replaced by pastes, but a great number remain. Other shrines are still preserved in several churches in Cologne. Another of the same kind as that of the kings, known as the shrine of Charlemagne, is preserved at Aix-la-Chapelle. It is made with eight arches on each side, with images of imperial successors of Charlemagne: the blessed Virgin between two angels on one end; and Charlemagne between pope Leo III. and a bishop on the other. This reliquary is longer than that of Cologne: one of its most beautiful features is a cresting of acanthus leaf along the ridge of the roof, with rich finials made of round granulated fruits growing out of nests of acanthus leaves elegantly wrought, and surmounted by a rosette made up of the leaves of the vine or acanthus. A fragment in the Kensington museum No. 7237 is a finial of this description, of beautiful design and carefully chased. A fine example of the smaller reliquaries, a crowned head in silver, may be seen in the British museum.

Of the ornaments or furniture of churches of the twelfth century no pieces of metal work surpass the candlesticks. The twelfth century produced a number of beautiful circles or crowns, not all as large as the great corona at Hildesheim but many of them made of silver, pierced, chased, and enamelled, such as that in the cathedral of Aix-la-Chapelle.

Many of the standing candlesticks used for the altar during this century are beautiful and astonishing examples of casting, sculpture, and finish. One of the most elaborate still existing is in the Kensington museum, a work of the early part of the twelfth century, made in Gloucester; it is numbered 7649. The material is a white alloyed metal, probably containing a good proportion of silver. In general outline the candlestick preserves

the type common to most of these objects down to the time of the renaissance. It is a straight stem divided by three bosses or knops, with a triangular base and a large grease-pan, and a pricket to hold a wax candle. All the parts are sculptured in spiral bands or in bold volutes, well composed and filled up, and all these bands and lines are stalk and leaf surrounding or supporting men, dragons, birds, or monsters. All are modelled with spirit, in dramatic action full of variety of attitude, and the figures and monsters are twisted into symmetrical knots, intertwined, lost, and reappearing through continual changes. The parts balance each other and each is drawn with a distinct meaning and system of knotting. No example in the whole collection shows better the power, ingenuity, and play of imagination of the artist.



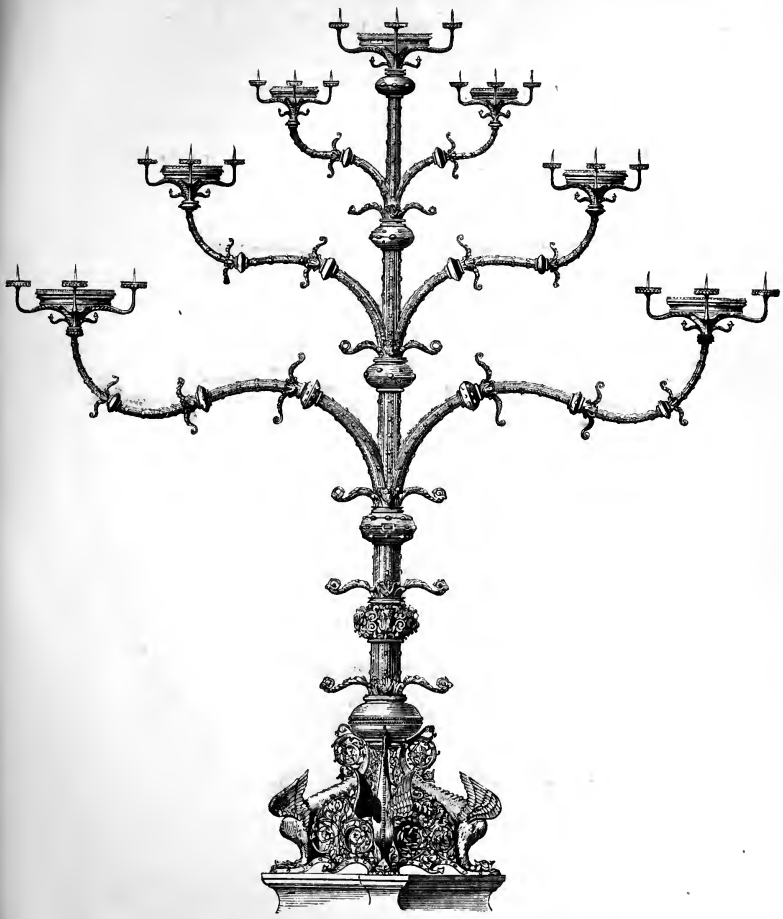
GLOUCESTER CANDLESTICK.

The churches of the twelfth century were furnished with single candlesticks of far larger size, standing not on the altar but on the floor of the church. During great festivals huge columns surrounded with branches or sconces for wax candles which made pyramids of light had, from an early period, been used to illuminate the great churches of Constantinople, Rome, Milan, and other important dioceses. Notably at the festival of Easter; when new fire is struck from a flint after

all lights have been put out on Good Friday, and a candle of great size is lighted, a type of the new dawn and the heavenly life of the Resurrection. During the first six or seven centuries these great candlesticks were columns of silver. Some faint remembrance of them as grand and imposing ornaments, as well as of the network of hanging lamps fed with olive oil, seems to have been kept by the Turks and Arabs in one or two mosques of Constantinople, Damascus, and Cairo. In some churches of Italy Easter candlesticks of the twelfth century may still be seen in the shape of columns of white marble, some divided by bosses inlaid with mosaic.

Seven-branched candlesticks were also made during the eleventh and following centuries after the example of that of the Jewish temple. They were on a large scale, and were usually of bronze or of some other alloyed metal. Many of them show the remains of gilding; the bosses were not unfrequently decorated with enamel and polished crystals. Without calling them absolute imitations of the candlestick in the arch of Titus, they are in accordance with the general outlines and divisions of the original, but with details such as the goldsmiths of the day were used to produce. Absolute imitation was rarely understood or attempted by artists of the middle ages, whether builders, sculptors, or painters. The fragment of one such candlestick still kept in the cathedral at Prague is traditionally called part of the actual Jewish candlestick. The Prague fragment is of gilt bronze, of the same style of work as the Gloucester candlestick, and the large *albero* at Milan. It came from Milan, and had been originally brought to Milan from Rome.

The largest, richest in design, and most complete that now remains is the *albero* of Milan. A complete cast of this candlestick is in the Kensington museum, and we give a woodcut of it. It is of gilt bronze over 14 feet high, made up of a straight reeded stem divided by bold round bosses by which the sets of branches are joined to the body of the candlestick. Graceful leaf work,



SEVEN-BRANCHED CANDLESTICK IN MILAN CATHEDRAL

answering to the involucrum in which the nut grows, issues from the bosses which divide the lengths of the stem and branches The base is made of four dragons, the tails rolled upwards in bold volutes in which are figures representing the great rivers of Italy. Rolled foliage and dragon work with figures and the zodiacal signs fill up the spaces between the four dragons. It has probably been restored and some figures replaced in the sixteenth century.

LOWER BOSS OF MILAN CANDLESTICK.

A fragment of a seven-branched candlestick of the same style and date remains in the cathedral of Rheims: this is said to have been 18 feet high. Another complete, about 10 feet high, of bronze with bands of enamel, stands before the altar of the cathedral of Brunswick, the gift of William the lion in the twelfth century. Another, of which there is a cast in the Kensington

museum, is kept in the church at Essen. It is probable that records of many more will be found in old church inventories. Candlesticks made with five branches only, and with three, are in the cathedral church of Halberstadt.

It will be seen from the example of the Gloucester candlestick that England was not behind continental nations in these beautiful pieces of metal work. Matthew Paris mentions amongst other examples of twelfth century goldsmiths' work two candelabra of gold and silver which were made at the abbey of St. Alban, and offered in the basilica of St. Peter in Rome.

Most of the reliquaries, whether large gable roofed chests or small moveable enamelled pieces that could be put on the altar and removed into treasuries, were made with round arched niches and colonnades, acanthus leaf capitals, crestings and finials, in accordance with the architecture of the day. Nor were reliquaries or shrines only made in this architectural spirit. The censers curiously carry out the same type; and were crowned with towers, turrets, and pinnacles, through the windows of which the smoke escaped. A remarkable example is kept in the cathedral of Trêves.

When the general plan or arrangement of twelfth century metal work was not architectural the details of ornamentation were bold, full of thought and invention, and showed a deep perception of the peculiar qualities of metal, its ductility and strength. No metal work composition of a later date is imagined and put together with more constant variety, or with a more just apportionment of balance; the masses of interlaced work rarely repeat each other, and the course of long rolls and knots of dragons is accounted for through many complications. The union of beaten work with engraving and enamel is well seen in the woodcut on the next page.

Chalices from the eleventh to the thirteenth century went through little change. In some early examples the shape of the old classic drinking cup may be traced somewhat bell-mouthed

and mounted on a slight stem. Those of the eleventh and

CRUCIFIX IN SOUTH KENSINGTON MUSEUM, No. 7234 '60.

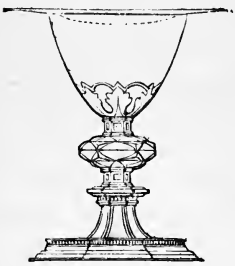
twelfth centuries are plain half globes with a round, spreading,

foot as wide or wider than the cup to give it steadiness, and have a boss on the stem for the convenience of the celebrant. About the end of the eleventh or the beginning of the twelfth century the use of two-handled chalices came to an end. Charlemagne gave to the basilica of St. Peter in Rome three chalices of gold at his coronation: the largest was two-handled and weighed 58 lbs. Another of the tenth century, the Ardagh cup, has been mentioned. Ancient chalices were sometimes made from antique cups cut in precious materials. On the bas-relief in the cathedral of Monza representing the coronation of the emperor Otho three chalices are shown on an altar: they represent three now in the treasury of the cathedral. One is two-handled weighing 100 ozs., set with precious stones, another of sapphire (sapphirine?), and the third of oriental agate, with gold settings, stems, and foot. A two-handled chalice supposed to be Byzantine is in the abbey of Wilten in the Tyrol. A beautiful chalice of early date is preserved in the national library in Paris: of gold, bound round with bands of enamel set in filigree gold, and with stones at intervals: it is called the chalice of St. Remi, and was made for or used at the cathedral of Rheims.

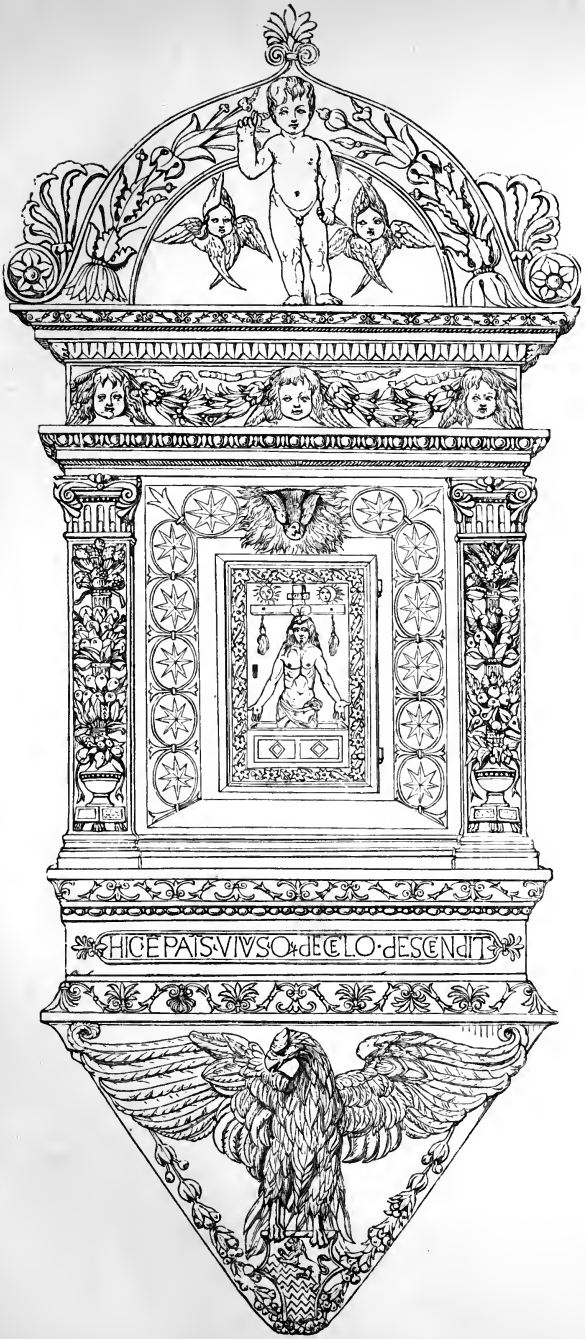
Poorer churches were provided with chalices made up with baser materials: the stem and foot were of copper or bronze gilt and the bowl of silver or silver-gilt. Decrees were passed in provincial synods and councils to enforce this ordinance. Other chalices had been in use for offering milk and honey to the newly baptized. These vessels were also placed with flowers and candlesticks as ornaments for the altar. Great cups, the types of the large lamps of the sixteenth and subsequent centuries, were hung over the screens or partitions of the sanctuary as ornaments: they ceased to be used in the twelfth century.

The first woodcut on the next page No. 237 '74, in the Kensington museum, a chalice of the thirteenth century, is a good representation of the forms now coming into use.

Patens were anciently very large. Anastasius mentions patens of gold weighing 30 lbs., used as basins to receive offerings. By the twelfth century they were flat dishes or plates engraved; this decoration is now no longer allowed, except on the outside. There are no patens of this early date in the Kensington museum, but the woodcut below represents one (No. 4523 '58) of the fourteenth century. Another common vessel of sacred use was the pyx, literally a box: in which the Sacrament was kept for the use of the sick and dying. It was very often made in a round shape with a conical cover; and early in the middle ages in the form of the mystic dove, of gold or silver, or of bronze or copper enamelled. These doves were hung by chains over the altar; standing on a dish and covered by a crown; curtains were hung round them. Pyxes were anciently deposited in one of the two chambers which were arranged on each side of the altar. At a later period shrines on the altar called "tabernacles" were provided for them, and the curtain became a roof or a canopy. This is now called in Italy the *baldachino*. Tabernacles were expanded till in the fifteenth and sixteenth centuries they became stone shrines decorated with sculpture, approached by steps, rising into lanterns and pinnacles to the roof of the church; the doors only were of metal. A beautiful example, the work of Adam Krafft, is preserved in Nuremburg; and a cast of another by Cornelius de Vriendt can be seen in the Kensington museum. In the cathedral of Munster in Westphalia there are two, one being in



CHALICE AND PATEN.



TABERNACLE, LATE FIFTEENTH CENTURY.

the shape of an enormous monstrance standing on a foot and upwards of fifteen feet high. In a church at Soest are five of these beautiful structures. A small "quattro cento" tabernacle of marble with gilt metal door is amongst the marbles of the Kensington museum : of this we give a woodcut, page 97.

An important class of ecclesiastical utensils were the croziers and staffs of bishops, abbots, and other ecclesiastical dignitaries, and those occasionally used by leaders of the choir. Many fine examples of episcopal pastoral staffs of the twelfth century are preserved in various public treasuries and galleries, and in private collections. Generally they are of gilt metal rolling over in a graceful whorl or volute, and the eye finished with a large flower covered with enamel : below the whorl comes a boss of open metal work. Sometimes they are dragons, scaled, with spines issuing from their backs, and ending with heads or tails of dragons in the eyes of the volutes. The crozier of Lismore in Ireland, now in the museum of the royal Irish academy, is of more primitive shape. It is a simple crook like the classic *pedum*, the front end of the curve straightened, finished with a dragon's head and crest along the back of the curve, more perhaps in outline like the neck and head of a horse.

The twelfth century has not left us many examples of goldsmiths' work for personal and domestic use. Thrones or seats were made for great personages after the model of the old classic curule chairs. Suger the abbot of St. Denis, the chancellor and minister of state of Louis VII. caused the gilt chair of Dagobert to be repaired, and it was probably added to under his orders.

Metal work, however, both for secular as well as for religious use was made by the enamellers of Limoges. Besides reliquaries, candlesticks, croziers, many pieces of metal work for the furniture of halls and chambers, and for the decoration of armour, were exported from Limoges : and even monumental effigies, as that

of Aylmer de Valence in Westminster abbey. The commoner kinds of jewels, such as buckles, brooches, or morses, for the belts of knights or the vestments of ecclesiastics, too poor to afford to buy silver or gold, were made in enamelled bronze and found their way over the north-west of Europe. The guilds and the trade of Limoges were probably far more active in this kind of manufacture than those of Cologne, whose work seems to have been devoted to shrines, reliquaries, candlesticks, monster-shaped ewers, &c. for religious purposes.

Of actual money, gold and silver coin, in the twelfth century in royal possession there was little. Often the crown jewels were put in pawn with the merchants of London, York, or other wealthy capitals. These treasures were therefore liable to continual dispersion. Unlike the jewels or vessels offered to churches which, though but occasional gifts, were never alienated and therefore accumulated in course of time, the personal property of mediæval kings was often all the disposable gold and silver that they could command. Scarcely any has come down to us nor have we more than scanty particulars as to the plate and jewels they used, much of which had to be given away as rewards or perquisites. The most valuable objects were the crowns which were worn not only during ceremonial acts of government but also on great festivals. The Conqueror wore the crown on three great festivals; on the Nativity in Gloucester, at Easter in Winchester, and at Whitsuntide in Westminster. The empress Matilda after the death of the emperor Henry V. in 1125 brought his crown with her to England. Stephen wore his at high mass on the feast of the Nativity in Lincoln in 1145. These ensigns of royalty were personal property and few of them descended from one reign to another. King John in 1216 crossed the Wash, going to Swinehead abbey in Lincolnshire, and in a sudden rise of the tide the crown and all his regalia were swept away. John, who was given to luxury, wore diamonds, emeralds, sapphires, and pearls profusely on his red cloak, on his girdle, gloves, and on the

baldrick of his sword. The gold coronet taken from prince Llewellyn at Builth was offered at the shrine of St. Edward the confessor. John de Fowick is named in the parliamentary rolls as the maker of a crown for the coronation of Marguerite, second queen of Edward I. Isabella, queen of Edward II., brought two crowns with her as part of her personal jewellery. Joanna of Navarre at her marriage with Henry IV. brought a rich crown, a sceptre of crystal, another of gold, besides numerous buckles and other jewels, all set with pearls and precious stones. Henry IV. had a crown made which he called the "great Harry," pawned afterwards by his son Henry V. in order to raise money for his war in France.

The gold crowns worn in action on the back of the helmet were small and made for that express purpose. The kings who exposed themselves with such a mark on their heads must have been brave men. Henry V. had a piece of his struck off by the axe of the duc d'Alençon in the desperate charge made by that prince on the king and his guards at the battle of Agincourt. Richard III. was the last of our kings who wore a crown in action. It was taken from his helmet after his death at Bosworth Field and hidden by a soldier in a hawthorn bush. Lord Stanley took it to the earl of Richmond after the battle, placed it on his head, and saluted him as king Henry VII. A crown in a fruited hawthorn bush became the device of king Henry. The Scottish crown of the Stuarts was found by Sir Walter Scott and other special commissioners in the old chest in which it is still kept in Edinburgh castle. The crown is said to be as old as the fourteenth century; and according to some traditions to have been worn by Robert Bruce: but the crown used for the coronation of that king was found in the possession of one Galfredus de Coigniers and brought to Edward I.

The kings who have died leaving treasure of any great value have been few. Henry I., one of the greatest princes of his time, ordered 60,000 marks to be taken from his royal chest for the cost

of his funeral and to pay his hired troops; and Henry II., towards the end of the century, is said to have left in the charge of Ranulph de Granville, his treasurer, as much as 900,000*l.* besides jewels. Joanna his youngest daughter, widow of the king of Sicily, claimed as legacies from her husband a chair of massive gold, footstools of gold, a table of the same metal on tressels, 12 feet long (these were probably thick plates laid over wood), and urns and vases, also of gold. Edward III. in 1340 pawned all his queen's jewels even to her crown to raise money for his French wars from the merchants of Flanders. He had pawned this crown the year before at Cologne for 2,500*l.*, till his subjects sent 30,000 packs of wool up the Rhine to redeem it.

CHAPTER VIII.

GOLD AND SILVER WORK IN THE THIRTEENTH, FOURTEENTH, AND FIFTEENTH CENTURIES.

THE art of precious metal work and jewellery of the middle ages reached the highest perfection during the thirteenth and fourteenth centuries; and this excellence slowly declined during the fifteenth. The same may be said of all the arts connected with the reign of pointed architecture

Architecture and metal work, though they had become national all over Europe during the twelfth century, had borne a likeness in many features to the architecture and the metal work of the eastern empire. In the thirteenth century this old family likeness disappeared. Constantinople was sacked by the French and Venetians, and Byzantine artists made no more work in the west. The Greeks employed gold, silver, and jewels in their churches, but the images of the Saviour and the saints were painted and no longer sculptured. The Byzantine art, stiff and severe in drawing now as then, survives and is practised still in the monasteries of mount Athos and other places; but it has made no change or advance, and remains a shadow of the splendour of the days of Basil the Macedonian and his immediate successors.

The pointed style in architecture marked a complete change. It was not the use merely of a pointed arch instead of a round one but a scientific system, well understood and carefully worked out.

The art of the goldsmith and all the arts grew and changed with it. The old solemn, dignified architecture, founded on the use of the classic column and the round arch, had gradually given place to lighter, more delicate and subtle forms of arch, window, column, and the various details of ornament proper to those features. This dramatic, complicated, elaborate style became the type and model of the work of the thirteenth, fourteenth, and fifteenth century goldsmiths. The Spaniards gave the later forms of it the title of *plateresca*, silver architecture, from the splendour of the architectural models when worked in silver plate.

If the sculptors and modellers of the thirteenth century had not learned in the scientific manner of the sixteenth they faithfully followed the living model as they saw it. The costume of the cloister and of the ministers of religion, the armour of knights and men-at-arms, and the rich dresses of women in the world, supplied models of the draped figure ready to hand. Of the grace and dignity of both armour and civil dress, the drapery of women, and the habits of ecclesiastics, we can have no truer representation than the many images on tombs still remaining to us. The artist had only to translate what was constantly under his eye into stone, alabaster, gold, silver, bronze, or other materials. Teaching that had been diligently carried on in monastic enclosures bore sound fruits. Hundreds of artist workmen could design and model correctly and with ease. In manuscript illuminations and ornaments, in hammered or chased metal work, in enamel and niello decorations, the lines are drawn with a firm and dexterous hand, perfectly trained for the work to be done. These artists were of unequal merit, as at all times, but none of their work shows ignorance or hesitation; ignorance, that is, of what may be called the stores of accomplishment of that day, or hesitation in carrying their share into execution.

This command of good and correct design led to a new and very beautiful method of enamelling. Hitherto goldsmiths were

reduced to set surfaces of gold with precious stones or with inlaid enamels, beautiful indeed because of the richness and splendour of the materials, but with little more than mere conventional designs or, if judged of as representations, weak and rude almost to barbarism. The fourteenth century enamellers had far greater resources at their command in translucent enamel. This kind of work is executed usually on silver. The metal is chased and modelled in very flat relief, the colours are laid over the reliefs and are quite transparent, so that the artist's work is seen in all its completeness, the light passing through the coloured glass substance as through films or slices of ruby, emerald, topaz, or sapphire. An immense step forward towards what makes up perfection in the goldsmiths' art.

Most of the valuable and highly wrought pieces of goldsmiths' work of the later thirteenth, fourteenth, and fifteenth centuries are enriched with this beautiful kind of enamel, and the Kensington museum collection is well furnished with examples. Precious stones became rarer in great pieces made for ecclesiastical use, because the more delicate kind of decoration which can be put to finer uses took their place. Occasionally beaten gold, translucent enamel, and precious stones, are used all together with beautiful effect.

Shrines, hitherto made like those of the three kings already described, were now built up of innumerable plates soldered together, with buttresses, pinnacles and traceried windows, like little models of churches or small chapels. These shrines, the offerings of perhaps generations of devout pilgrims not only of a large neighbourhood but of half a kingdom or half of Europe, continued to be the masterpieces of precious metal work. The great reliquary at Aix-le-Chapelle, given by Frederic II. and known as the chasse of Notre Dame, retains the old outline, but with marvellous wrought work along the upper sides of the gables and the ridges of the pointed roof. Instead of the meagre and stiff foliage of the older shrines of Charlemagne and of the three

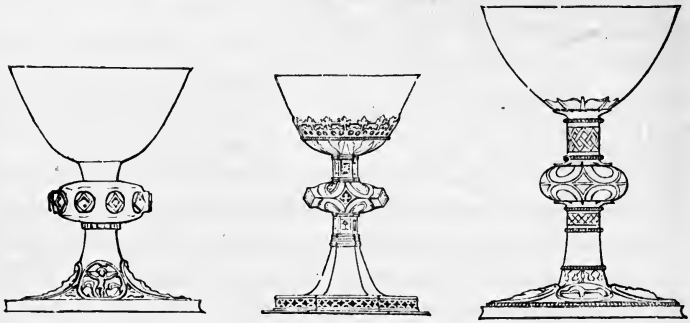
kings, the foliage in the thirteenth century work is composed, beaten, pierced, and chased in rich rolls of leaf and stalk. The side mouldings and other architectonic details are set with enamels encrusted in filigree, while the recesses or niches into which the sides and ends are divided are filled with images hammered up in high relief.

It is impossible to describe the details of our lost shrines in this country. Only the wood framework of that of St. Edward remains in Westminster abbey over the small arches or porches into which cripples and the sick were placed, in the hope of a miraculous cure. That of St. Thomas of Canterbury was removed by Henry VIII. Others of great repute were those of St. Alban, at St. Alban's abbey; St. Erkenwald, at St. Paul's, London; St. Edmond, at St. Edmond's Bury; St. Cuthbert's, at Durham; St. Hugh of Lincoln; St. Mary of Walsingham; St. Frideswide in Oxford. On many of these shrines goldsmiths continued to be employed from time to time as persons bequeathed their gold and jewels for some special adornment. In 1339 three London goldsmiths were retained for a year by the chapter of St. Paul's in consequence of a bequest of gold and jewels to the shrine of St. Erkenwald. The smaller churches had reliquaries of every size and in many shapes, but most of them after the pattern of a little chapel, a turret, spire, lantern, or some other light and ornamental feature of a church in the style of the time.

The vessels used on the altar, the chalices, pyxes, tabernacles, censers, were as richly wrought as the reliquaries. There are several chalices in the Kensington collection (see p. 106) of which the bosses and feet are covered with plates of silver, coloured with figures or half figures of saints in translucent enamel, while the borders and intervening parts are chased, hammered, and modelled in many ways.

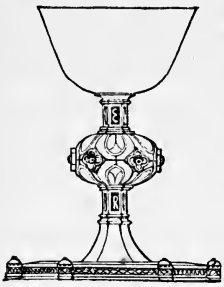
The pastoral staffs, which before the invention of the transparent enamelling that belongs to this time of finer embossing

and engraving had been bold but simple in shape, were now made of extraordinary richness. The stems were covered with



14TH CENTURY CHALICES.

plates of silver-gilt or of gold, the curved heads were longer, and coloured with beautiful enamelling. The architectural type, so unlikely to suit a staff, was used in the ornamented heads or knops from which the curves spring with great effect, whatever might have been thought beforehand as to its propriety. There are good examples in the Kensington museum. A still finer crozier, the work of William of Wykeham, is preserved in New college Oxford, his own special foundation. The upper part is a nest of the richest niche and tabernacle work in hammered silver-gilt, the niches filled with small images of the saints and the plain surfaces coloured with enamel. The founder's own image remains in the volute kneeling before the blessed Virgin, to whom he dedicated his two colleges: her image has been removed since the change of religion.

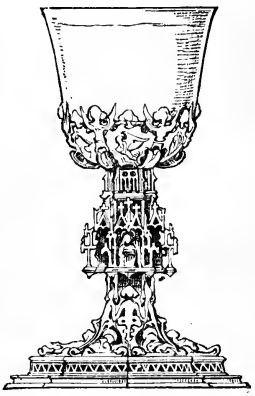


15TH CENTURY CHALICE.

The beauty of architectural ornament, quaint in design and most minute and elaborate in execution, is perhaps best shown

at South Kensington on a morse or clasp for a cope, No. 394, '68. The adoration of the magi, a composition in complete relief, is placed in a sort of courtyard or cloister surrounded by buildings, part representing the top of the palace of Herod who, with his guards, looks down on this scene. Below is the house of Loreto in a green enamelled field, with figures, flowers, and animals in gold upon it. The different details of the buildings require a careful study; though ornamentally balanced these tiny structures are varied throughout, and seem studied from architecture well known to the artist.

One of the most beautiful examples of architectural ornament in the collection is a chalice of the fifteenth century, of which the knop and stand is a mass of rich architectural tabernacle work in silver-gilt.



15TH CENTURY CHALICE.

From the thirteenth century onwards the arts, that of gold and silver work especially, ceased to be confined to the cloister. Goldsmiths' guilds were founded, and rich and costly vessels and utensils, table and personal ornaments, were made for the princes, barons, and feudatories, amongst whom the landed property of Europe was parted out. Italy more fertile and rich than the northern kingdoms, with richer municipal institutions, better navies, and greater commerce, was divided into small but wealthy states. At the head of many of them were independent princes; and Venice, Genoa, Pisa, though little more than wealthy mercantile cities, had an aristocracy far richer in proportion than the nobility of the great northern states. In Italy therefore when comparative peace was established the goldsmiths produced the most numerous and the most beautiful works; France, Germany, England, and Spain followed the example, but

not so completely or with such method as after the end of the mediæval period.

We have few of the ornaments, jewels, or household plate of the thirteenth or fourteenth centuries, but there are many descriptions. The coronation spoon is preserved amongst the regalia in the Tower, and is the only piece of mediæval metal work in that collection except the state swords. It is of gold, the bowl oval, divided by a spine down the middle, the stem twisted, with a flat knop set with precious stones half way down its length and fashioned into a dragon's head where it joins the bowl. The crown, sceptres, and other state jewels, and the various objects used at coronations and coronation feasts, except the ivory sceptre called that of Anne Boleyn, are not older than the restoration of Charles II. The personal splendour of princes and noblemen during these centuries was great. Of all the princes of Europe, perhaps, the dukes of Burgundy had the richest and most costly court during the fourteenth and fifteenth centuries. The goldsmiths of Burgundy and of the low countries were the most accomplished artists of their time. The plate armour of barons and knights, though few complete suits now remain earlier than the fifteenth century, can be studied in many monumental portraits faithfully produced from life. It was more than a noble and costly dress; it was consecrated in the eyes of the generation who wore it. It represented the mystic armour of the Christian hero, the "helmet of salvation, the breastplate of justice," &c. It was put on by the knight after vigils and prayer and a bath. Accordingly armour was enriched in proportion to the wealth of the wearer. The helmet was jewelled and sometimes covered with velvet. An example of a covered helmet can be seen in the tower of London. William of Hainault gave a jewelled helmet to his son-in-law, Edward

CORONATION SPOON.—COPY IN SOUTH KENSINGTON MUSEUM.

III. in 1334. Elizabeth of York decorated the helmet of Henry VII. with her own jewels when he started on his expedition to the north against Perkin Warbeck. The crown was worn on it, and the device of the family. The belt was of leather, silk, or precious tissues, and covered with scales or plates of gold or silver-gilt and enamel, or jewelled. The richer girdles were made of wrought metal jointed together and set with precious stones. The belt went round the body at the hips. The spurs and the hilt and mountings of the sword, dagger, and the scabbards were of gold or silver-gilt. The sword-hilt of Henry V. at Azincourt was of gold and jewelled. Gold chains of massive links were worn round the neck, and badges and reliquaries or love tokens were fastened to them. A small triptych which contains a *pietà* may be studied in the Kensington museum No. 633.

15TH CENTURY TRIPTYCH.

From the thirteenth century the houses of feudal lords were furnished, some of them very richly, with silver, silver-gilt, and occasionally pure gold plate. Many inventories of royal treasure are extant giving a tolerably exact account of each object, with the nature of the precious stones with which they were set. The miscellaneous items of the dining-table are referred to in the old French romance of Partenoz de Blois:—

> "Tables, mises, et doubliers,
> Couteaux, faillliers, et cuillers,
> Coupes, henas, escuelles d'or et d'argent;"

and in Richard Cœur de Lion:—

> "Now styward I warne the
> Bye us vessels gret plente
> Dysschys, cuppys, and sawsers,
> Bollen treyes and platers" &c.

In royal and great houses the guests washed the hands before and after dinner in dishes of enamelled bronze, silver, or silver-gilt, sometimes after dinner in perfumed water or rose water. Even as late as the fourteenth century, according to Turner, only knives and spoons were in general use at meals. Forks are never shown in illuminations of feasts or dinners. The knives had handles of silver or ivory, but it was common for noblemen to eat with knives pulled out of their wallets. According to Froissart, one of the tokens by which Gaston de Foix was known to his adherents was a certain knife he carried about him with which he helped himself at meals. Forks, however, were occasionally used. Eleanor of Castile queen of Edward I. had amongst her plate a pair of knives with silver sheaths enamelled, with a silver fork handled with ebony and ivory, and a fork of crystal. Forks were considered articles of extreme luxury. Piers Gaveston, favourite of Richard II. and the ideal of a mediæval dandy, had three silver forks for eating pears: John, duke of Brittany in 1306, had one "to pick up soppys."

HANAP.—SOUTH KENSINGTON MUSEUM.

The dishes, bowls, and ornamental plate put on the table on ceremonial occasions such as coronations were costly and most curious. We no longer speak of *feasts* in our day. In the middle ages when markets were ill supplied and money scarce princes made progresses to distant houses and estates and consumed what was gathered in each by purveyors or paid in kind by tenants. When a great entertainment could be given it might often soothe or reconcile the nobility of a discontented province, and preparation was made accordingly. Henry III. spent 300,000 marks on the marriage feast of his son Edward at Bordeaux. Eleanor of Provençe was met on her first journey to London by three hundred and sixty citizens on horseback

richly dressed, and each carrying a gold or silver cup for the coronation feast (their own no doubt, brought to show on the occasion). Mr. Herbert, in his history of the city corporations, quotes details of the plate of Edward I. among which we may

CUP WITH TRANSLUCENT ENAMEL, SOUTH KENSINGTON MUSEUM.

note thirty-four pitchers of gold and silver, for wine; ten gold chalices of the value of 140*l.* to 292*l.* each; ten cups of silver-gilt, some with stands of the same or enamelled; more than a hundred smaller silver cups of from 4*l.* to 118*l.* value; cups of

jasper; plates and dishes of silver; gold salts; silver hanapers or baskets; a large ewer set with pearls all over, and many more. A very beautiful covered drinking cup of Burgundian or Flemish origin in the Kensington museum is carefully worked with architectural mouldings, and has four mullioned windows with geometric tracery round the body and four in the cover, filled with panes of transparent enamel set in gold, through which the light passes: see woodcut on preceding page.

Bowls of maple wood were often set in gold, silver-gilt or silver, and called mazers. Several can be seen in the Kensington collection. Besides cups, jugs, covered and standing cups, the table ornaments were often in the shape of animals, apes, stags, sometimes on wheels, with hounds, horses, and huntsmen. Eleanor of Provençe received from Marguerite queen of France for a coronation present, a large and sumptuous peacock of silver with sapphires and precious stones, wrought with silver set in the tail. From the beak perfumed waters were poured into a basin of chased silver in which it stood. This was for washing the fingers after meals. The wassail bowl was round like the mazers, passed from hand to hand and was the favourite drinking vessel. It was sometimes covered with costly work, enamelled with the arms of the owner, or had "curious emblems and choice old legends expressive of hearty goodwill and fellowship, inscribed on the rim and cover. St. Christopher engraved on the bottom appeared before the eyes of the wassailer as he drained the bowl."

The salt cellar was an important feature of the table. It was of gold, silver-gilt or plain silver, and generally had a cover; a napkin was placed over the salt when not in use to keep the cover from actually touching the salt. This tradition survives in the salt cellars of the seventeenth century kept in the tower of London. Salt was the emblem of hospitality. When guests sat on lower side tables the salt marked the limit of the high seats or dais. A curious silver gilt and enamelled salt cellar in the shape of a giant is at All Souls college in Oxford.

If the salt cellar was the most significant piece of plate on the mediæval table, the most costly and curious was the ship or *nef*. It was usually in the shape of a boat or ship. Sixteenth century *nefs* were made with masts, yards, shrouds, and sailors climbing in the rigging: models, or conventional models, of actual ships. The name is derived from the French word *navette*, a vessel in the shape of a boat in which incense is kept for the altar. The *nef* held spices and sweetmeats and was in place of the épergne of more modern times. One is kept in the Rathhaus of Emden in Hanover with masts and rigging, from the hull of which wine was drunk, but this piece is probably not older than the end of the sixteenth or early seventeenth century. It was sometimes put on wheels. Piers Gaveston, already quoted, had among his jewels in 1313 a ship of silver on four wheels enamelled on their sides. In the inventory of the jewels of Edward III. a ship of silver is numbered. It was on four wheels, had gilt dragons on both ends, and was valued at 12*l.* 7*s.* 4*d.*

On occasions of ceremonial festivity, such as coronation feasts, the gold and silver cups, ewers, and basins used by the king or queen became the perquisite of the great state officers whose duty it was to hold or hand them. Mention is made often in old chronicles of the offerings made on these occasions by the king and queen at the high altar of Westminster abbey; for instance;—Edward II. offered, first, a pound of gold in the likeness of a king holding a ring in his hand; the second was eight ounces of gold in the form of a pilgrim putting forth his hand to take the ring. This represented the legend of St. Edward the confessor receiving a sapphire ring from the hand of St. John the baptist in Waltham forest (still worn at coronations, and actually used, it is said, by her Majesty). The offering of the pound of gold was made at the last coronation. "Her first oblation, a pall or altar cloth of gold, and an *ingot* or *wedge* of gold of a pound weight." In the middle ages these offerings were in the

likeness of the saint to whom the king or queen had a special devotion.

The plate of Isabella of France the queen of Edward II. is worth notice, as showing the property of this kind held by queens as parts of their dower. She brought to England, besides two gold crowns set with precious stones, several gold and silver drinking cups, gold spoons, fifty silver porringers, twelve great silver dishes, and twelve smaller, besides jewels, clothes, linen, and tapestry.

The dispositions in mediæval wills in regard to hereditary jewels and plate are curious illustrations of the splendour in which so many of the rich lords then lived in England. We may wind up this account of mediæval plate with a glance at a few of these taken from the 'testamenta vetusta' of Sir Harris Nicolas. Most of these wills dispose of chalices and sacred vessels used in the private chapels of the testators; of reliquaries, and of relics. For example—the earl of Warwick in 1380 bequeaths "a bone of St. George;" Humphrey de Bohun, earl of Hereford, in 1361 "a cross of gold in which is a piece of the true cross of our Lord," and this is found in many wills. Gold and silver plate is left for making sacred vessels. Lionel duke of Clarence, in 1368, after disposing of a girdle of gold and a favourite horse called Maughreleyn devised to John de Capell, his chaplain, a "girdle of gold to be made into a chalice in memory of my soule, also the circle of gold with which my brother was created prince, and the circle with which I was created duke." Jewels are mentioned which are tokens of tenures of land. Sir Michel de Poynings bequeaths "a ruby ring, which ring is called the charter of Poynings." Quaint drinking cups and salt cellars in the shape of animals have been mentioned. Edmund earl of March in 1380 bequeaths "a silver salt cellar in the shape of a dog, and our best gold horn with the belt. To our daughter Elizabeth a salt cellar in the shape of a dog, a gold cup and one hundred pearls." By the same testator; "to Symon

of Sudbury, archbishop of Canterbury, a tripod with two silver lions, gilt and enamelled, a pouche in the form of the body of a stag with the head of an eagle." Richard earl of Arundel and Surrey in 1392 leaves his wife Philippa (among other pieces) her own cup, called *Beaichier*, two salt cellars of silver; two candlesticks of silver, for supper in winter; and "a pair of basons in which I was accustomed to wash before dinner." The duke of Lancaster in 1397 "a chain of gold *of the old manner*, with the name of God in each part."

Several generations of earls of Warwick were possessed of plate and jewels of extraordinary value. Earl Thomas in 1400 bequeaths an "image of the blessed Virgin; two cruets in the shape of angels;" (many sacred vessels, and the sword and coat of mail of Guy of Warwick) his "cup of the swan, and knives and salt cellars for the occasion of the coronation of a king." Earl Richard, in 1435, to the collegiate church of Warwick an image of our Lady in pure gold, there to remain for ever (only a century in fact). He desires his "executors to cause four images of gold, each weighing twenty pounds, to be made like unto myself, in my coat of arms, holding an anker." These were for the shrines of St. Alban's, Canterbury, Bridlington, and Shrewsbury. Amongst his table plate were two dozen silver dishes, twelve chargers, twelve saucers of silver, a pair of covered silver-gilt basons, four other basons, and four ewers of silver; twelve pieces of silver of one sort with "my arms enamelled on the bottom of them; a great paytren; a cup of gold, with the dance of men and women." Isabel countess of Warwick in 1439 bequeaths to the altar of our Lady of Caversham "a crown of gold made of my chain, weighing twenty-five pounds, and other broken gold in my cabinet, and two tables, the one of St. Katherine the other of St. George, the precious stones of which tables are to be set in the said crown." Walter Hungerford knight, lord of Hungerford, Heytesbury, and Hornet, in 1449, leaves to his son Sir Edmund "a cup of gold, and cover with a sapphire on the head; best pair

of cuirasses to be chosen by Robert Hungerford, lord Molins, out of the armour at Farley Hungerford; a cup of silver bordered with gold," &c.

Lastly, it is to be noted that in the fifteenth century the heads of the profession of law became possessors of large personal property in plate. Sir Thomas Lyttleton, justice of the common pleas, (died 1487) bequeaths "a bason of silver, ewer of silver, two great salt cellars, and a kever, weighing ninety-three oz.; a standing plain gilt piece with plaine gilt kever, weighing twenty-four oz.; six bolles of silver, in the middle of which been enamelled six months of the year; a 'standing peece' with kever and two others; depe washing bason of silver, forty-one oz.; two salt-cellars, a kever to one of them, weighing thirty-one and a half oz.; another of silver, all gilt, in the myddes of which be three eagles with kever, weighing thirty-three oz.; low peece of silver with kever;" a dozen of best spoons; four more salts, and several other pieces of silver; naming also specially "the best dosein of the *second best* sort of his spones," and "a dozen spones of the third sorte." A splendid service of plate for a man not holding one of the great offices of the state. Wealthy merchants of the thirteenth, fourteenth, and fifteenth centuries, the municipal dignitaries, and the heads of corporations and guilds were not far behind the great lawyers in the outward insignia of their offices. They were, perhaps, more modest in their plate and in the personal expenditure of their families.

The pointed architecture of northern Europe, carried out with such unity and completeness in ornamental detail, was never so entirely at home in Italy. The gold workers, however, of Venice and Florence, and of Umbria and Tuscany, produced beautiful works in the style of that architecture as their contemporaries did in France, England, and Germany. This may be seen by referring to the chalices, the crosses, and other works in hammered metal, generally enamelled, of Italian workmanship in the Kensington museum. Two remarkable examples must also be referred to,

the silver altar of Pistoia and that of St. John the baptist in Florence. The latter of these was begun the first, and maestro Cione, a goldsmith of the first half of the fourteenth century, executed a bas-relief still preserved illustrating the life of St. John. That of Pistoia was begun later in the same century. It is composed of a number of bas-reliefs, small images and figures in high relief. There are nine bas-reliefs on each side (the life of St. James) the work of Leonardo di fer Giovanni of Florence in 1371. The whole weight is estimated at 447 lbs.

The altar of St. John the baptist in Florence is about three yards and a half in width by three feet and a quarter deep, and four feet three inches or thereabouts in height. Each of the ends contains four bas-reliefs, disposed like those on the front; sixteen in all: but two are still wanting and are filled in by paintings. They represent the acts of the saint and are in high relief, some twelve inches high. The frieze is made up of a row of forty-three niches containing small silver images. The borders and frame pieces are elaborately ornamented with windows, little niches, with translucent enamels over reliefs, and niello. These two altars are masterpieces of the greatest goldsmiths of the two centuries during which the art called Gothic reached its highest perfection and began to decline.

Among the great Italian goldsmiths of the fourteenth and fifteenth centuries must be numbered Luca della Robbia; Antellotto Baccioforte and Maggiano of Piacenza; Nicolò Bonaventura and Enrico his nephew; Arditi of Florence, and Lorenzo Ghiberti, author of the bronze gates of the baptistery of Florence; Bartolommeo Cenni, Andrea del Verrocchio, Antonio Salvi, Francesco, son of Giovanni. Antonio del Pollaiolo holds the highest place.

In the middle of the fifteenth century the art of printing from engraved plates was invented. Maso Finiguerra, a worker of niello of great repute in Florence, made a pax in 1452 for the baptistery of St. John; now in the cabinet of bronzes in the

gallery at Florence. An impression on paper from the plate, before the lines were filled in with black enamel, is in the public library in Paris. It is the earliest known example of an impression from an engraved metal plate. The art of engraving, whether for the decoration of the piece of metal work engraved or for the purpose of taking printed impressions, now became an important branch of the goldsmiths' art. Another accomplishment was the sinking of dies for coins, and specially for portrait and memorial medals, for paxes, and for other goldsmiths' work, in which flat surfaces could be first embossed by casting or striking the cold metal, then by finishing with the graver. A number of beautiful examples may be studied in the Kensington museum.

CHAPTER IX.

THE REVIVAL.

BEFORE the close of the fifteenth century many causes were combining to bring about a change in the arts of painting, sculpture, and architecture. The taking of Constantinople by the Turks, the council of Florence, and the reunion of the Greeks, brought the Greek language and literature to the knowledge of the Italians. Printing was invented and the works of the ancient poets and writers, Greek and Latin, known heretofore only by manuscripts were put within reach of the learned and welcomed with enthusiasm. This was the "Renaissance" or revival of the ancient learning. We have in our day but a faint conception of the delight and excitement which this revival produced throughout all Europe, more especially in Italy. It must be enough to say that the arts, and that of the goldsmith with others, were engaged wholly in the new range of thought and of aspirations which possessed the rising generation. Vessels for religious use were made according to the prevailing fashions. In the monstrance given in the woodcut on the following page, decorated with translucent and painted enamel, the reader can see an example of these renaissance changes. Numberless grand old reliquaries, chalices, and other vessels were broken up, melted, and remade, all over Europe; in Italy and France especially. The lovers of the new style had no sort of sympathy, such as we feel, with the splendour or skill of earlier generations.

The Church even took a lead in these changes as regards all

MONSTRANCE. ITALIAN. 15TH CENTURY.—IN THE KENSINGTON MUSEUM. NO. 287. '64.

arts concerned in her service. The peninsula of Italy had been

cleared of foreign armies mainly through the activity of the popes. They and all the princes of Italy enjoyed a freedom and a renewed prosperity to which they had long been strangers. The popes became patrons of the poets and artists of their age, and their influence in this respect reached beyond the boundaries of their own states into most of the countries of Europe.

The earliest works of the renaissance, known in Italian as the "quattrocento" period, partook of the character of the age that was drawing to a close and of the new ideas. This union of two styles was more common in the French, Flemish, Burgundian, German, and English art than in that of Italy, but it is to be noticed in the metal work of Italy as well. The seriousness and simplicity of traditions so long followed prevented artists trained in the earlier schools and workshops from throwing themselves into the broader and bolder lines and forms of the art of ancient Rome. Hence there is a singular sweetness and tenderness in much of the work of the early artists of the revival. The goldsmith had been the type of the complete artist during the middle ages. He worked in all materials and produced an infinite variety of designs for all sorts of things, from enamelled and gilt reliquaries to brooches, belts, buckles, and jewellery, on every scale of size and magnificence. Under the revival it will be found that many of the greatest painters, sculptors, and architects had been goldsmiths first, or had got their education in art in the workshops of master goldsmiths, still schools of every kind of artistic accomplishment.

Francesco Francia, a goldsmith of Bologna, is spoken of by Vasari for the excellence of his enamelling on metal in relief. He was celebrated as a sinker or cutter of dies for coinage and for medals, a kind of work which was much favoured by the Italian princes of the late fifteenth century, of whom many beautiful portraits were made in this particular form. He did not learn painting till after he had grown to manhood, though it is as a painter that he has become famous in after ages. His metal

work so far as we can judge of it from his painting, like that of Sandro Botticelli (to whom the design of the pax, which is engraved, is attributed) partook of the tender and serious beauty that belonged to the earlier times. Domenico Ghirlandajo, so called from the garlands he made of jewels for the Florentines, was another trained under a goldsmith, who became a painter in later life and is known to us by his paintings. A still more celebrated name is that of Andrea del Verrocchio, the master of Leonardo da Vinci in painting, and the sculptor of the statue of Bartolommeo Coleoni in front of the church of SS. Giovanni è Paolo in Venice, the earliest and the grandest of modern equestrian statues. He has been named among the goldsmiths employed on the silver altar of St. John. He was sent for by pope Sixtus IV. to restore the images of the apostles in the pontifical chapel. Another goldsmith of great name was Ambrogio Foppa, called Caradoffo, of Milan. He was skilled in the whole range of goldsmiths' work, principally (says Vasari) in enamelling on relief and in medal cutting. Michelagnolo di Giuliano was a goldsmith of Florence much employed by Lorenzo and Giuliano de Medici, for whom he made embossed armour, enamels, niellos, and jewellery of every kind. He was the first teacher of the goldsmith whose name stands above all others of the revival of the sixteenth century, Benvenuto Cellini, who writes of Giuliano with much praise in his autobiography.

PAX. EARLY 16TH CENTURY. — SOUTH KENSINGTON MUSEUM.

The Sixteenth century.

The goldsmiths' work of the sixteenth century reached its greatest splendour and beauty in the hands of Benvenuto Cellini. He represents the goldsmiths, the silversmiths, and the jewellers of the revival, as Michael Angelo and Raphael represent the

painters and sculptors. Born in the year 1500 he was apprenticed at thirteen to Michael Angelo. From him he went to the work-

PAX. ITALIAN. 16TH CENTURY.—NO. 401. '72. IN THE KENSINGTON MUSEUM.

shops of many goldsmiths in Florence, Pisa, Bologna, and Siena. At nineteen he went to Rome. He returned to Florence, but was driven away in consequence of a fray, then went back to Rome, and entered the service of Clement VII. for whom he made coins and medals. He took the military command of the castle of St. Angelo, and while there took to pieces the jewels of the pope by special command to get money to pay the troops while the pontiff was besieged by the Spaniards. According to his own account they produced four hundred pounds of gold. During fourteen years he worked at jewellery and goldsmiths work for the sovereign pontiff, paying visits to Naples, Florence, Venice, and other cities of Italy, making some stay in Padua. From thence he travelled to Geneva, Lyons, and Paris. He was introduced to Francis I. but again returned to Rome, and was imprisoned on the charge of having robbed the castle of St. Angelo of some of the treasure he had got together during the siege. He was released and went to Paris in 1540. Cellini spent five years in Paris, then quarrelled with the duchess d'Estampes, and got permission to return to Italy. There he took service with Cosmo dei Medici in Florence and worked for him till his death in 1570. During these years he undertook the mint of the grand duke, made beautiful jewels for the duchess, and executed several important pieces of bronze sculpture. Vasari speaks of his many works in gold, enamel, and jewellery set with precious stones, as of the highest merit. He covered the vessels he executed with small figures, such as a chalice of gold ordered by Clement VII. the cup of which was supported by the theological virtues. His jewels were enriched with figures on a minute scale. A necklace containing a history of the Passion, with separate compositions in each of its links, has been exhibited by lady Mountcharles in the Kensington museum : it might without improbability be attributed to Cellini. A book of hours is in the museum of the duke of Saxe Coburg, the cover of which ornamented with little figures and compositions in enamelled

gold is attributed to him. A salt cellar of his workmanship is in the museum of Vienna. A book cover of exquisite workmanship with compositions relating to the fountain of youth and other poetic subjects, is in the Kensington collection, No. 736. '64: it comes, probably, from the admirable school of jewellers established by Cellini in France, if not by the great artist himself. There are two precious cups attributed to Cellini at Munich and, it need not be said, a vast number of jewels are ascribed to him on no sufficient authority. Considering the number of rich and costly cups, vases, and jewels he is known to have made and the value that was set on them in his own day and since, it is not unreasonable to suppose that many of his works must still remain, cautious as we should be in accepting the claim of his authorship.

Cellini wrote two treatises, one on sculpture and another on the goldsmiths' art. He treats, as Theophilus does in the *schedula*, of the setting of precious stones and the making of enamels. He describes the translucent enamel laid over reliefs of silver, so common in the fine chalices and vases of the fourteenth and fifteenth centuries; and of enamel made in bands of gold and set transparently as glass in the side or bottom of a vase, as in the vase 403. '72, already noticed p. 111. French writers give this kind of enamel the name of "plite" or "plique à jour." Cellini discusses the method of its execution, speaking of a cup of this kind shown him by Francis I. The enamel paste is put into compartments prepared for it with false sides, an iron cup inside, and a plate of the same metal outside. The enamel can be fused and attached to the surface of the gold without softening the surface of the iron sufficiently to prevent the removal of both the inner and outer false sides; and the enamel can then be polished. The processes described by Cellini in the sixteenth century are on the whole the same as those contained in the treatise of Theophilus. Jewel setting, enamel and niello, hammered and cast work are treated by both in the same way or with little substantial difference. Though

certain kinds of enamelling had not been discovered in the time of Theophilus the goldsmiths had practised for 400 years most of the processes of that craft. Cellini was a contemporary and admirer of the great Italian artists of his day and his art represents the ideas then so popular, the symbolism and imagery of the classical Olympus.

The reliquaries, chalices, monstrances, and other work made for religious uses during the sixteenth century were not to be compared with the work of the middle ages for serious and appropriate treatment. Still they were elegant and often of beautiful execution, as in the pax shown in the woodcut p. 123.

HAMMER. ITALIAN. 16TH CENTURY.—FROM A CAST AT SOUTH KENSINGTON NO. 266. '72.

A variety of smaller utensils or ornaments, such as brooches, bells, and other objects for ecclesiastical use, was profusely decorated with embossing, engraving, enamel, and precious stones. This hammer was made for the jubilee of 1550.

It would be difficult to say whether Flanders, Spain, or Germany was the first country to follow the example set by the Italians and the French. In Paris, as already noticed, Cellini had been received and had established goldsmiths' workshops. He himself bears witness to the abundance and excellence of their ecclesiastical metal work, imagery, and table plate. The artists who succeeded Cellini made numbers of jewels composed of precious stones and misshaped or *baroque* pearls with additions in gold and enamel. Valerio Vicentino; Giovanni da Ferenzuola; Luca Agnolo; Pilote; Piero, Giovanni, and Romolo del

Tovaloccio; Piero di Mino; Lautizio of Perugia; Vincenzo Dati; Girolamo del Prato, are among the names of Italian goldsmiths of this period. Benedict Ramel was goldsmith to Francis I. François Desjardins to Charles IX.; Delahaie to Henri IV. François Briot was a goldsmith of great skill in embossing tankards, cups, and various kinds of plate. A pewter cup by this artist is in the Kensington museum. It was no doubt a model made for a work in silver-gilt, and unfortunately nothing is preserved of his work but the models. It seems to have been not an uncommon custom with artists to make and keep them.

Among the processes in use in the sixteenth century by Italian goldsmiths should be included damascening, or working designs in gold and silver on iron, bronze, and other medals. There are different methods of executing damascene work. The ground is tooled over with lines according to the design proposed. Gold or silver wire is hammered or pressed into these cavities and the harder metal takes firm hold of the wire. On softer metal thick leaf is hammered into the cavities, the edges of which are pressed down so as to fasten in the gold or silver leaf. The best known artists in this material are Paolo, surnamed "Azzimino" from his skill in damascening; Paolo Rizzo of Venice; Giovanni Pietro Figino, Bartolommeo Piatti, Francesco Pellizzone, and Martino Ghinello, all of Milan. According to Cellini the Lombards excelled in damascening the foliage of the ivy and the vine, the Tuscans and Romans of the acanthus.

The great wealth of Spain, the gold mines in it, the early discoveries of America and the quantities of the precious metals brought from thence by the navigators to that continent, made the Spanish towns the homes of wealthy guilds of goldsmiths. The quantity of ecclesiastical metal work and of plate for household use in that country must have been enormous towards the beginning of the sixteenth century. Spanish reliquaries and monstrances of the middle ages were made after architectural models: which fashion continued into the early part of the

sixteenth century. There remain, however, as M. J. Riaño tells us "objects of silversmiths' work worthy of notice where there is no architectural model, *e.g.*, images of the Virgin covered with silver plating in imitation of drapery. Curious examples are to be seen at Astorga of the fourteenth century, and of the fifteenth and sixteenth at Toledo, Seville, and other Spanish towns. But the most striking specimens of silversmiths' work are the *custodias* (monstrances) which were saved from the French." These monstrances are generally in the form of small architectural domes, lanterns, or spires, such as the French, Flemish, and German reliquaries. "The multitude of columns, statuettes, minute subjects in relief, pinnacles, and general ornamentation render the *custodias* of the best time of the silversmiths' work complete works of art." Becerril, Carrion, and Merino, are among the names of the artists devoted to this kind of work. "Those who legitimately bore the palm were the family of d'Arfe, a race of goldsmiths from Germany. Enrique d'Arfe made a famous custodia early in the sixteenth century which was robbed by the French; another for the cathedral of Cordova, 1513; another for that of Toledo 1515-24, both of which remain, and are in the gothic style." The chalice in the woodcut 132. '73 at South Kensington is an example of Spanish work of the renaissance.

SPANISH CHALICE, A.D. 1549.

Spanish jewels of this period are rare. All that need be said of such productions here is that, perhaps, no collection has more important and interesting examples than that brought from the sanctuary of the Vergen del Pilar at Saragossa, now in the Kensington museum. Mr. Riaño gives some names of silversmiths and goldsmiths from manuscripts containing designs,

presented as specimens for admission into the corporation of silversmiths of Catalonia. "These volumes have never been mentioned by any writers who have treated of this subject, and may be considered unknown. I have been fortunate enough" adds Mr. Riaño "to be able to look through them and copy the following names of artists who worked in gold and enamel," with the dates and subjects of their designs: Joan Masanell, jewels and pendants, 1534. Rafael Ximenis, a dagger, 1537. Antonio de Valder, a dagger, 1537. Benedicte Sabat, enamelled jug, 1545. Gabriel Comes, a hand screen with a delicate handle, 1546. Pero Juan Poch, silversmith of the empress Isabella, a vase, 1551. Antonio Conill, dagger, 1553. Francisco Perez, necklace, 1559. Juan Ximenez, a large pendant jewel, 1561. Francisco Vida, figure of Phaeton, 1561. Felipe Ros, an enamelled medallion and a vase, 1567 and 1597. Joan Font, a vase, 1572. Narciso Valla, pendant jewel, 1575. Juan Pau, medal of Santiago, 1586.

Germany was scarcely behind Spain in following the Italian revival. In the costliness and dignity of the reliquaries, shrines, and vessels for ecclesiastical use, the German goldsmiths of the twelfth and succeeding centuries during the middle ages were surpassed by none. Precious jewels and plate for secular use were rich and costly. The feudal dignity that surrounded the successors of Charlemagne had been kept up with splendour, and this splendour was reflected in various degrees and with much pomp and circumstance in the numerous courts of German princes, according to their wealth. As early as the fourteenth century when Charles IV. was crowned with the iron crown of Lombardy and afterwards with the golden crown of the empire in the Vatican, "an hundred princes" says Gibbon "bowed before his throne. At the royal banquet the hereditary great officers, the seven electors, who in rank and title were equal to kings, performed the many solemn and domestic services of the palace. The seals of the triple kingdom were borne in state by

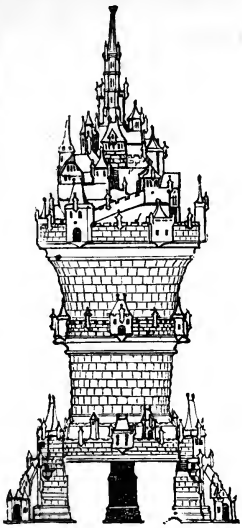
the archbishops of Mentz, Cologn, and Treves, perpetual archchancellors of Germany, Italy, and Arles. The grand marshal on horseback exercised his function with a silver measure of oats which he emptied on the ground. The great steward, the count palatine of the Rhine, placed the dishes on the table. The great chamberlain, the margrave of Brandenburgh, presented after the repast the golden ewer and bason, &c."

In several chief cities of Germany guilds of goldsmiths flourished during the sixteenth century. Silver cups and plate

PENDANT OF THE GUILD OF GOLDSMITHS OF GHENT. 15TH CENTURY.

of all kinds for household use were made by them after the designs or in the spirit of the Italian artists. Augsburg was probably the richest seat of this manufacture and the earliest to

adopt the new style. Nuremberg, a walled and wealthy city, proud of its privileges, its old families and its art, remained longer attached to the old traditions. One of the most remarkable pieces of table plate at South Kensington is a covered gilt cup, made after the shape of one of the towers of Nuremberg, representing even the rustication of the stonework. The supports are little fortified outworks; round the base and the waist of the cup run galleries fortified by sentry turrets and larger towers. The cover is a representation, actual or conventional, of the citadel. There are two sloping ascents or roads with houses, towers, and bridges over portions of the moat; in short, a complete model of a nest of buildings such as are seen in the distant towns of the landscape backgrounds of Dürer.



HANAP. SOUTH KENSINGTON MUSEUM. NO. 245.

Gradually the genius of Peter Vischer and the stay he made in Rome introduced the more modern ideas in metal work and in gold and silver plate into his native city. Hans Krug or Kruger and his son Ludwig were artists of Nuremberg of the beginning of the century. The father of Albert Dürer was a goldsmith at Cula in Hungary and migrated to Nuremberg in 1502; Jacob Hofmann worked there in 1564; Hans Maslizer and Jonas Silber in the second half of the century. Wenzel Jamnitz or Jamitzer 1508–1585, author of a work on perspective with cuts by Jost Amman, was one of a family of gold and silver smiths of the Nuremberg guild. The silver cup at South Kensington, No. 150, is attributed to the hand of Wenzel. A cup of similar shape attributed to Cellini, kept in the print room of the British museum, is more probably also by the hand

of Wenzel. In both cases the lips of the cups are made in six lobes or cusped projections, and corresponding bosses are beaten out under them. The surfaces are embossed with figures and strap or band work, foliage, and animals of admirable design. Several bossed cups are in the collection at South Kensington. Many are double, one fitting over the lip of the other so as to make a piece of ornamental plate on the sideboard. An examination of these German cups, as well as of the hanaps (covered cups without stems), will show a peculiar ornament made of narrow leaves, scrolls, or stalks, gracefully beaten about like streamers of silver or silver-gilt and set round the knob or top of a cover. It seems to carry out the traditional leaf-work of beaten metal seen in early mediæval German work.

SILVER-GILT CUP IN THE KENSINGTON MUSEUM.

The Augsburg goldsmiths were more thoroughly Italian and at an earlier date than those of Nuremberg. Their cups, salvers, and jewels followed the style of decoration of the great Italian

masters so completely that it would be difficult to assign a vast quantity of decorative gold and silver smiths' work, and specially jewellery, to either nation where hall marks are not to be distinguished. The German cup, of which we give a woodcut on the opposite page, is thoroughly Italian in design. The number of excellent goldsmiths working at Augsburg from the sixteenth to the eighteenth century was very great. Johann Kornemann is the name of an artist who made himself a name in Rome and Venice before settling at Augsburg; George Prunl; Anton and Franz Schweinberger, and many others might be added. As the great centre of commerce between northern Europe and Italy and the Levant, and a free city enjoying imperial privileges, Augsburg was also the richest manufacturing city of Germany in the fifteenth and sixteenth centuries. Merchant families, such as the house of Fugger, were often wealthy, and showed as much splendid luxury in the service of the table and the furniture of their houses as some of the princely courts of Europe.

With the goldsmiths should be noticed those engravers of ornaments, sometimes called the small masters, who designed specially all kind of ornament for gold and silver smiths. The German artists of the late fifteenth and sixteenth centuries were exceptionally bold, quaint, abundant, and often humorous. Many engravings on wood and copper remain to attest their excellence in this respect.

The revival made quicker progress in England in jewels and goldsmiths' work than in architecture. We seem to have been indebted to Flemish, German, and Italian artists for the first change from mediæval types, and the old traditions lingered long in the country. Henry VII. came to the throne at the close of the long and savage wars of the roses. During the continuance of the struggle the nation went back in many ways from the refinement of the fourteenth century. The cultivation even of home fruits ceased with the ruin of houses and manors,

and the desolation of orchards and gardens; the population

MEDALLION. GERMAN. 16TH CENTURY.—IN THE KENSINGTON MUSEUM.

dwindled; the arts lost their vigour and beauty. The architec-

ture, sculpture, and metal work were not equal to what they had been, and fresh life was needed when peace was once more secured. The reign of Henry was peaceful and prosperous. He gathered riches, encouraged learning, built much, invited foreign painters to his court, and made the beginning of a collection of books, paintings, plate, and other furniture of his houses, some of which remains in our royal palaces and in the British museum to this day. Though careful of his money Henry VII. knew how to show royal splendour on fitting occasions. At the marriage feast of his son prince Arthur, in the palace of the bishop of London, princess Katharine of Aragon was served on gold plate set with precious stones and pearls, valued at twenty thousand pounds.

When Henry VIII. succeeded he inherited a large treasure and his reign was rich and splendid, especially in all that relates to the present subject of gold and silver smiths' work. That he had Italian goldsmiths under his orders is more than probable, after the example of his royal brother of France. A George or jewel for the garter belonging to this period and now in private hands is said to have been made for him by Cellini. It is of fine gold set with jewels. Some idea of the richness of his dress and personal ornaments may be gathered from the notices met with in Hall and other writers of the pageants and banquets of the court. At a dance in his palace of Westminster the king invited the ladies to pluck off the golden letters H and K with which his dress was covered. On this the citizens who were allowed to look on broke in, took the jewels from the ladies and the letters and ornaments from the king, who was stripped to his doublet and drawers. One shipmaster got 3*l.* 18*s.* 8*d.* for the letters of beaten gold which fell to his share.

The accounts of the festivities prepared for Anne Boleyn illustrate the sumptuous living of the court. Gold cups of assay (standard gold) were used by the new queen at her coronation

feast, and given as fees to those whose office it was to hold them. Henry had already given her nearly twelve hundred pounds value of cups, flagons, bowls, trenchers, covered cups, spoons, salts, chandeliers, and a chafing dish when he created her countess of Pembroke. He took her with him when he went to meet Francis. The banquet hall was there hung with cloth of silver, raised with gold. The seams were covered with wreaths of goldsmiths' work set with stones and pearls. A cupboard of seven stages (the reader will remember more than one painting of Paolo Veronese in which silver and gold plates are represented set out in this way) was covered with plate of gold, and no gilt plate. Ten branches of silver-gilt and ten of white silver hung over the table by long chains of the same metal and bore two wax lights each.

The splendour of the royal table was not without imitators amongst the great lords and dignitaries of the kingdom. The treasure of cardinal Wolsey, of which an account was given in by his goldsmith Robert Amadal in 1518 with the weight and cost annexed, consisted of such items as "an image of our Lady" of 300 ounces of sterling silver. Six great candlesticks made at Bruges with leopards' heads and cardinals' hats, chased and gilt, weighed two hundred and ninety-eight ounces. Among the cardinal's service of plate were three "chargeours," a hundred and ninety-seven ounces; twenty-five plates, nine hundred and sixty-eight ounces; twenty-two dishes, four hundred and fifty-one ounces. The usual weight of platters was from thirty-six to forty ounces each; dishes, twenty to twenty-five; saucers, twelve to fifteen; a cup of "corone" gold, sixty-four ounces. According to Cavendish, his biographer, "There was at great banquets a cupboard as long as the chamber was in breadth, with six deskes in height, garnyshed with guilt plate, and the nethermost deske was garnyshed all with gold plate, having with lights one paire of candlesticks with silver and guilt, being curiously wrought, which cost three hundred marks. This cupboard was

barred round about that no man might come nigh it, for there was none of all this plate touched—there was sufficient besides."

Such table plate was not confined to the households of personages like the cardinal or the very greatest noblemen of the early sixteenth century. John, lord Dynham, in 1505 bequeathed to his wife fifteen hundred and ninety ounces of plate. Apostle spoons among other items are named in the will of Amy Brent, who bequeathed in 1516 "thirteen silver spoons, with the figure of J'hu and His twelve apostles."

Holbein designed cups, arms, and jewellery during this reign. A drawing by him of a cup for queen Jane Seymour is kept in the print room of the British museum, with other designs for jewels, &c. Some of his drawings are in the museum of Basle, notably one of a dagger with a Dance of death in tiny figures. Torrigiano had been already employed by Henry VII. and designed candelabra and other decorative metal work belonging to the goldsmiths' craft. In the privy purse expenses published by Sir H. Nicolas the name of John Baptist, the king's Italian goldsmith, occurs more than once, and that of Cornelius, probably a German or Swiss.

The privy purse expenses of queen Mary give a detailed list of the jewels and precious goldsmiths' work in her possession while princess. On the occasion of her wedding feast there was a sideboard of nine stages of gold cups and silver dishes. Philip of Spain gave her jewels worth fifty thousand ducats, and sent a treasure to London that filled ninety-seven chests, each a yard and a quarter long, loaded on twenty carts.

The age of Elizabeth was a period of great expenditure in jewellery and goldsmiths' work, especially such as could be carried on the person. The dresses of the queen were extravagant both in fashion and cost, as we see by tolerably exact representations in her portraits. Her courtiers were expected to make her continual presents, and these were generally of

jewels. There is a miniature case in the Kensington collection, No. 4404. '57, a fine example of enamelled work, made perhaps for a present to be given by herself. Without referring to private collections we may quote several pieces of table plate preserved by colleges and corporations which belong to the latter half of this century: a cup and cover, a tankard, a set of apostle spoons and a salt-cellar, at Corpus Christi college, Cambridge, the gift of archbishop Parker; an ewer and salver belonging to the corporation of Norwich; and other pieces belonging to several city of London companies. In the Kensington museum there is a sugar or pepper caster, of silver, with a medallion on it of St. George and an inscription to the sovereign of the order; like those commonly used from the seventeenth century to the present time. In 1559 the earl of Arundel entertained her majesty sumptuously in the palace of Nonsuch, and gave her the cupboard of rich plate that she had used for supper. This example, as well as that of giving jewels, had to be followed by other noblemen and courtiers of the queen. She herself sent a cupboard of plate to James VI. on the occasion of the baptism of prince Henry. Some of the gold cups were so heavy that sir James Melville to whom they were delivered could hardly lift them. They were soon melted down.

SUGAR CASTER. 16TH CENTURY.

CHALICE AND PATEN: LATE 16TH CENTURY. IN THE KENSINGTON MUSEUM.

Rich church plate was occasionally made for ceremonial occasions; as for example on the occasion of the baptism of James VI., when Elizabeth sent queen Mary Stuart a font of gold worth a thousand pounds. Generally sixteenth century chalices for the reformed church were in the shape of that in the annexed woodcut and which continues to the present day.

The age of qeeen Elizabeth was not free from superstitious notions about alchemy, a science supposed to lead to the discovery of chemical agents which could dissolve all substances, recombine the component parts of metals, and make gold out of them. Cornelius Lanoy, a Dutchman, was committed to the Tower for making delusive promises on this subject as well as about the elixir of youth, magic mirrors, and other wonders then popularly believed. On the other hand Dr. Dee, a divine of the church of England and a professor of these arts, enjoyed and retained the queen's confidence.

CHAPTER X.

THE SEVENTEENTH AND EIGHTEENTH CENTURIES.

THE goldsmiths' style underwent but few changes of fashion for the first part of the seventeenth century. Much of the

FLEMISH SALVER, 17TH CENTURY.—IN SOUTH KENSINGTON MUSEUM.

magnificence with which the art of the revival had filled the castles and palaces of Italy had become by that time familiar

to all the north of Europe. For instance, the castle of Kronenburg, so far north as the entrance of the Sound, to which place the earl marischal of Scotland went to receive Anne the future queen of James I. was "very richly furnished with silver statues and other articles of luxury."

In Italy, for years the home of artists who in many different states and capitals had acquired great skill in goldsmiths' work, jewels and plate were made and sent abroad. While any of the great artists of the sixteenth century remained, and under the hands of their immediate pupils and followers, the old designs continued to be reproduced. No art, however, so closely bound up with the habits of men as that of the goldsmith remains long stationary. The light and graceful leaf-work, the admirable figure-work, and the simplicity and dignity of both religious vessels and household plate and ornaments gave way to heavy and coarse designs. More count was made of quantity in working the precious metals than of beauty.

In Spain the admirable training of the pupils of the school of religious sculpture as well as of the guilds remained, but the shapes and decorations of their work grew pompous and heavy to a greater extent than in Italy. The large quantities of the precious metals that came into Spain from Mexico induced givers of church vessels to make their offerings costly, and the same sentiment helped to swell the cost and ostentation of silver in private houses. Rich Spanish households were considered "marvellous" in regard to their abundance of table plate. Sumptuary laws were passed but proved useless against this luxury, "which caused Montesquieu to say in his 'Esprit des loix,' that the repeated statutes of the Spaniards prohibiting the use of precious metals were as absurd as if the states of Holland prohibited the use of cinnamon."

In Germany the great guilds of Augsburg and other cities already named continued for the first thirty or forty years of the century to produce excellent goldsmiths. Matthias Walbaum

of Augsburg made the silver images of the famous chest of the dukes of Pomerania now in the Kunstkammer of Berlin: a cabinet, or necessaire, with minute subdivisions and fittings and ornamented with small images and bas-reliefs. Hans Pegolt is another of the Augsburg artists of this time. Fine models in lead are kept in the Kunstkammer of Berlin of the proofs struck by the artists of the day of their works in more precious material during these two centuries. As to cups and vessels, the lobed cups of Germany in the seventeenth century were continued. Another favourite shape was that to which we give the name of tankards. Tankards with a handle, purchase, and hinged lid, were made of all sizes and with many varieties of decoration both in Germany and other northern beer-drinking countries, as well as in our own: and they retain their popularity to this day. They were often made to enclose gold and silver coins, both on the flat top and bottom and bent round and set in the sides. Peg tankards had knobs or pegs in the side to measure the proportion to be drunk by each, when they went the round of several guests.

NUREMBERG TANKARD.

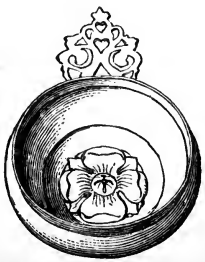
ENGLISH. 17TH CENTURY.—IN THE KENSINGTON MUSEUM.

During the reign of James I. gold and silver smiths' work followed in this country much the same changes as have been noticed. Of ecclesiastical plate there was scarcely any produced worth description except the pieces among the regalia in the Tower of London. Toilets of silver became the fashion. Several pieces of the toilet services now kept in Knole park, Kent, are electrotyped and may be seen in the

Kensington museum. There are others in private hands. The great county families of England were probably never more prosperous than during the reign of James I. The king encouraged the residence of his subjects on their estates, and the many pictures of old English baronial interiors, such favourite subjects with modern artists, show how often people look back to those days as a kind of golden age. Vast tankards and salvers are constant details in these popular compositions, doubtless with perfect propriety. Rich people must have possessed great quantities of silver for the table. Indeed, Charles I. in his wars drew most of his resources from this class of his subjects, and much hard money from country plate chests and college butteries was contributed to his treasury in Oxford. The greater part has gone since then to the melting pot, and there remain few pieces of plate of the reign of the Stuarts. The covered cup in the first woodcut overleaf is in the Kensington museum.

SILVER-GILT CUP. ENGLISH. 17TH CENTURY. — IN THE KENSINGTON MUSEUM.

The fondness for rich arms and armour was kept up in England in the seventeenth century, as in Italy, France, and other countries. In 1606 Christiern king of Denmark, brother of queen Anne, visited this country and amongst costly presents made on board



SILVER BASIN FOR HEATING WINE. 17TH CENTURY.

his ship at Gravesend gave James I. a rapier and hanger worth seven thousand pounds, set with gold and jewels. The hammered and gilded suit of armour given by the armourers of London to Charles I. is familiar to visitors of the Tower of London.

COVERED SILVER CUP. 17TH CENTURY.

The coronation plate, with the exception of the spoon before described and one or two sixteenth century salt-cellars, is not older than the restoration of Charles II. in 1660. The old crown jewels were taken to pieces and sold by the parliamentary commissioners after the death of Charles I. A small ivory sceptre with mounts of gold and enamel, commonly called that of Anne Boleyn, was probably made for queen Anne of Denmark. The queen consort's crown and jewelled sceptre were made for Mary of Modena, the rest for William and Mary. The present great crown has been taken to pieces and remade more than once. Probably the ampulla which is given in the woodcut, for holding the oil at coronations, though not older than the seventeenth century may represent an earlier piece.

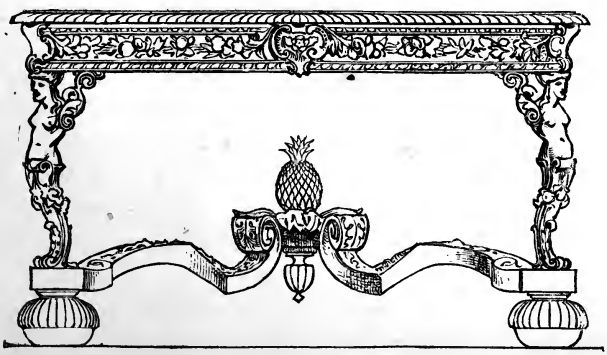
IVORY SCEPTRE IN THE TOWER OF LONDON.

SILVER-GILT AMPULLA, USED AT CORONATIONS.

The reign of Louis XIV. was a time of great encouragement for silversmiths in France, but the love of size, weight, and ostentation prevailed over that of elegance and beauty. The government nevertheless under the wise rule of Colbert did more

than any other in Europe in its day to ensure good training to artists of all kind. Several goldsmiths were lodged in the Louvre. Labarte names Balin and Delaunay, the most skilful artists of the time, Labarre, two of the Courtois family, Bassin, Roussel, Vincent, Petit, and Julien Defontaine, renowned for his jewels. Sarazin, the sculptor (1660), was employed in the same kind of work and made a crucifix partly in gold of great beauty for the king. Silver fire-dogs, basins, jugs, tables, seats, mirror frames, cabinet mounts, and toilet services, were made on a massive scale. Lebrun the painter, who was at the head of the tapestry works, superintended this and other costly furniture for the king's houses.

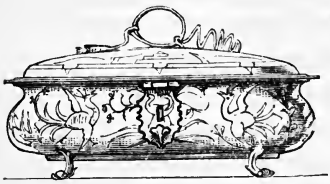
A silver mirror frame belonging to the queen, which is now in the Kensington museum, represents this massive Louis quatorze silver work. It bears the cypher of Charles II. Much of the French plate of this period was melted down during the wars at the close of the seventeenth century. The king ordered the nobility to bring their silver to the mint, setting the example. "He melted down tables, candelabra, large seats of silver enriched with figures, bas-reliefs and chasings by Balin. They had cost ten millions (of francs) and produced three."



SILVER TABLE AT WINDSOR CASTLE.—COPY IN SOUTH KENSINGTON MUSEUM.

At the restoration of Charles II. French fashions ruled the day at the English court, if not in the country houses. The king's rooms in Whitehall palace and even those of the maids of honour were furnished with silver toilet services; mirror frames and basins; and every article for use was of that metal. They were melted by William III. after the death of Mary, under the same necessity that had caused the destruction of the silver of his mortal enemy Louis. But the silver toilet service of queen Mary Beatrice continued to be laid out for her at St. Germains with four candles, till the days of the French revolution. A few silver tables, fire-dogs, and other pieces, are still among the furniture of Windsor castle.

Beautiful beaten and engraved work was produced in England till the close of the reign of James II. The casket in the woodcut belongs to the latter part of the seventeenth century.



SILVER CASKET. 17TH CENTURY.—AT SOUTH KENSINGTON.

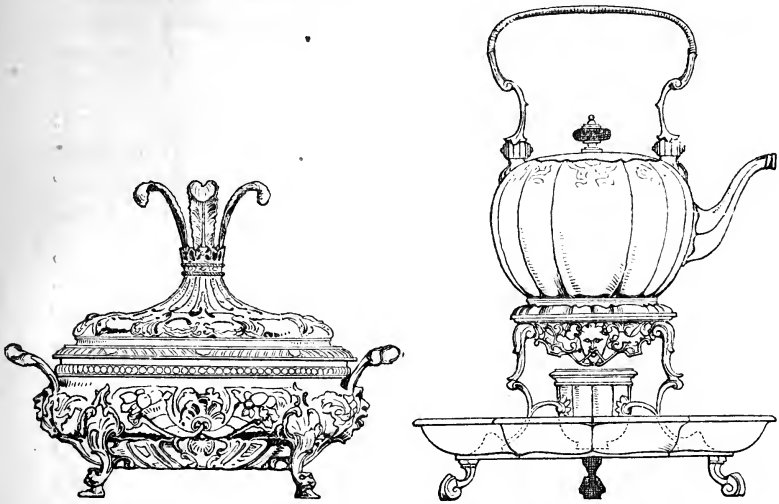
The standard of silver in England was raised during the last years of the seventeenth century from 11 ozs. 2 dwts. to 11 ozs. 10 dwts. fine in the lb. troy, and plate of this standard was hall marked with a figure of Britannia. The table plate of the reign of queen Anne is much prized; it is massive, simple, and seems to exhaust the

18TH CENTURY BOWL.—AT SOUTH KENSINGTON.

feeling for renaissance decoration so long maintained and with so much propriety by the sixteenth and seventeenth century

goldsmiths. This bowl or salver belongs to the beginning of the eighteenth century.

Some tureens and other plate made for prince Frederic, son of George II., are kept among the royal treasure at Windsor: and electrotype casts of several effective pieces are in the South Kensington museum.



TUREEN AND TEA-KETTLE AT WINDSOR CASTLE.—COPIES IN SOUTH KENSINGTON MUSEUM.

French taste continued the law in Europe in all questions of sumptuary art during the first half of the eighteenth century. German and Russian princes followed the style both of the architecture and the rich decorations of royal houses in France. Germans went beyond the French into a wild extravagance of ornament and a violation of old laws of propriety which had been long accepted. Yet, it must be admitted that many of the sculptures and much also of the plate and jewellery of that age are not wanting in dignity and grace. Frederick William of Prussia, the plainest and the most severe of kings in habits of life and

matters of economy, fitted up his palace at Berlin with extraordinary splendour. One of his reasons was economical: for banks were not at hand in those days, and precious metals, hoarded in the shape of furniture and decorations, came opportunely to hand.

As the century advanced a remarkable part was played in the luxurious fashions of the day by Frederick Augustus, surnamed the Strong, elector of Saxony and king of Poland. The manners of his court were dissolute; the gay and affected art of the Meissen porcelain, though wonderfully skilful, belonged to a time of decay: and his goldsmiths equally threw off the last remains of classic grace and simplicity and adopted the style named "*baroque*" from a Latin word signifying a wen or excrescence. The collection of goldsmiths' work still stored in the green vaults in Dresden, collected by or made for Augustus, is full of monstrous productions; ostrich eggs, shells, mis-shapen pearls forming parts of vases, jewels, and table ornaments of all sorts. The actual goldsmiths' work is nevertheless admirable. The artist of greatest repute in this achievement was Johann Melchior Dinglinger, 1665—1731, who studied at Augsburg and in France and settled as the goldsmith of Augustus in Dresden in 1702. All tourists have seen his model representation of the court of Aurungzebe: the furniture, and costumes of the numerous little personages, and all the ceremonial had been gathered from the descriptions of Bernier.

In the course of the century, during the seven years' war, a destruction of private plate and of ancient shrines in France occurred such as was scarcely surpassed in the revolution of '93. It was about the same time as the meltings of Frederic the great. "Silhouette," says Carlyle, "the comptroller-general, issued a declaration that the king compels nobody but does invite all and sundry of loyal mind to send their plate (on loan, of course, and with due receipt for it) to the mint to be crowned, whereupon the rich princes of the blood, duc d'Orléans foremost, and official

persons, Pompadour, Belleisle, Choiseul, do make an effort, and everybody that has plate feels uneasily that he cannot resist, and Nov. 5th the king's own plate, packed ostentatiously in carts, went to the mint. Dauphinesse, noble Saxon lady, had already volunteered with a silver toilet table of hers, brand new and of exquisite costly pattern."

Towards the close of the life of Louis XV. the discoveries of Herculaneum and Pompeii, with the fragments of metal work there found, turned the attention of artists once more towards classical antiquity and influenced the silversmiths of our own and other countries. The French plate of Louis XVI.'s reign abounds in graceful bas-reliefs of wreaths, bold medallion heads, and those animal legs and supports so common in the bronze utensils of the Greco-Roman artists. In our own country the brothers Adam

VASE BY ADAM.

SILVER VASE, 1770.

threw their energies into the cultivation of this art. Their style partly followed the French "Louis seize" artists who produced furniture and gilt metal work during the last days of the French monarchy of matchless excellence.

After the death of king Louis XVI. came the deluge. The greater part of the ancient shrines, chalices, reliquaries, croziers, and other sacred utensils were seized by commissioners, the stones removed, the weight of metal noted, and sent off to the revolutionary mint. This destruction was, unfortunately, by no means confined to France. In Italy, in Spain, in Malta, wherever the armies of the French government were in possession, all which could not be removed or hidden was seized and sent to Paris. To take a special instance, let us once more hear Mr. Riaño on the destruction and robbery done in Spain: "In 1810 the French sent a commission to the Escorial, who took possession of the treasures there, only allowing the friars to remove from the reliquaries the relics they contained. As the number of caskets and jewels of rock crystal, gold, and enamel was almost innumerable, it took a long time to do this. The French broke them to pieces to save time, and threw the relics into baskets which they left to the friars, and the gold and silver and precious stones they carried off with a number of silver lamps and holy vessels, in ten camp waggons, escorted to Madrid by three hundred horse. It is impossible to describe the wanton destruction and robbery committed in the Spanish churches, where they destroyed the largest collection of art objects of gold and silver workmanship existing in Europe. From the cathedral of Leon alone they carried away more than 10,000 lbs. weight of old silver." Unfortunately Spanish collectors have also sold most of their old plate. He says again: "The family of the marquis of Moya had the privilege granted them in 1500 by Ferdinand and Isabella that the reigning sovereign should present them with a gold cup on the 13th of December in remembrance of the delivery of treasure on St. Lucia's day, when they were proclaimed kings of Spain." Let the reader imagine an historical

COVERED VASE.

collection of cups, in yearly succession for three hundred and some odd 13ths of December. They have all been sent to the hammer.

The taste of the French empire under Napoleon was a dry and affected classicalism. It was without the grace of the days of Louis XVI.

In this country efforts were made by George IV. to have silversmiths' work from the hands of the best artists. Flaxman designed the well-known Wellington shield and some vases and salvers. There are in the Kensington museum casts of plate now in the collection at Windsor castle designed by Flaxman and Stothard, and executed by Rundell and Bridge.

The old designs have gradually fallen into disuse, and there is not much to be said of modern plate. The best things executed during this century are probably the vases and groups of figures called race cups. Many of them are of excellent workmanship; but as to those which are not copies or imitations it would be out of place to offer any criticism. A few good modern designs by English and foreign artists, some still living, will be seen among the pieces selected from the recent national exhibitions. The names of signor Castellani, the modern Cellini, and of his scholars belong to the history of jewellers. Those of many gold and silver smiths, both English and foreign, deserve to be recorded with honour, but any detailed notice of the works of living artists would be beyond our limits.

CHAPTER XI.

HALL MARKS.

BEFORE finishing this review of ancient and modern gold and silver work something must be said as to the measures taken by different kings and governments for securing the purity of the precious metals used for coinage and in commerce. All gold and silver in England is stamped by the goldsmiths' company after testing the purity of the metal with certain marks called "hall marks"; marks, in fact, stamped in the goldsmiths' hall. The same practice is carried out in France and in most European countries.

Gold is too soft to be used for coin or for ornaments without a certain mixture or alloy of other metal, usually copper. At an early date in the middle ages goldsmiths, both in Paris and London, sold as pure gold a metal so much alloyed as to be far below the real value of gold; and royal and parliamentary edicts were passed to secure the proper purity. It has been suggested that in ancient Rome there were trade regulations on the same subject, and that the arch of the goldsmiths still standing in Rome shows that the members of the craft were collected in one quarter. It is possible that they made laws for the protection of their craft and of buyers. As early as the thirteenth century, when the stalls of the Paris goldsmiths were collected on and close to the *pont de change* (the old bridge

over the Seine) regulations were drawn up for a corporation of jewellers and goldsmiths by Étienne Boileau, provost of Paris, 1258–69. It was called the *confrèrie* of St. Eloi, patron of the craft.

In 1303, under Philip the fair, this confraternity was recognised as established and money was regularly changed at the counters on the bridge. Ten years later the same king ordered that gold should be tested and stamped. No goldsmiths could be admitted to the corporation who had not served an apprenticeship in Paris. Other statutes were made at different periods regulating the responsibilities of the guilds. The testing was done by the "*touche*" on a touchstone. The "*touche de Paris*" was recognised far and wide as a guarantee of purity for gold, and the "sterling" mark of London for silver. The touchstone is an imperfect black jasper from mount Tmolus known as "Lydian stone." The touching needles in this country are tipped with metal in various states of alloy. They are twenty-four in number, answering to the twenty-four carats of an ounce of pure gold. One set is alloyed with silver, another with copper. A small piece of the gold to be tested is cut off, and the streak made therewith on the stone compared with those made by the needles. The streak is washed with aquafortis which dissolves the alloy, leaving only the particles of gold. In some countries, Germany for instance, silver is tested by sets of sixteen needles, answering to the sixteen "loths," according to which the fineness of silver is computed and this number varies in different countries. The English assay for gold is now done by scraping off a small part which is accurately weighed and digested in nitric acid; this dissolves the copper, &c. leaving the gold a black powder, which is then fused into a button of pure gold. The gold is again weighed, and the difference shows the proportion of alloy. If the alloy is silver it is thrown down by common salt; copper is precipitated by iron.

Silver is assayed by the "cupel." About ten to twenty grains from each separate part of a compound piece of plate are scraped off, accurately weighed, wrapped in pure leadfoil, and fused in a crucible made of bone ashes, called a cupel. The metal lead and alloy are oxidised and absorbed by the cupel, leaving the silver pure. The difference of weight determines the purity as in gold.

In France government tests were used in other cities besides Paris: *e.g.*, in Limoges, Le Puy-en-Velay, Troyes, Rouen, Bourges, Amiens, Nancy, and Metz, as early as the fourteenth century. Each city used stamp marks of its own. Lacroix gives the arms and stamps of a hundred and six French corporations of the middle ages, and as many as a hundred and eighty-six stamps of separate cities in use up to the end of the monarchy, about 1789.

In England assaying is noticed as early as the year 1300, at which time there seems to have been much false gold and jewellery sold. Gold was ordered by the crown to be of the "touch of Paris," and silver to be sterling. Gold was pure from the reign of Henry III. to Edward III.; then of three carats alloy out of the twenty-four. The present standard for coinage is twenty-two carats out of twenty-four of pure metal, and the remaining two of alloy. A second standard, used in manufactures, is of eighteen carats fine: wedding rings are of twenty-two.

In the middle ages no false stones were allowed to be sold in gold settings, nor real stones in false metal. Articles of lower standard than that established were forfeit to the king. Proclamations and regulations on the subject were made in England as early as 1180 but nothing was enacted by statute for nearly a hundred and fifty years. The goldsmiths of London were incorporated by charter in 1327, with fresh recognition under Richard II. in 1394, and Henry VI. 1423. York, Newcastle, Lincoln, Norwich, Bristol, Salisbury, and Coventry were

authorized to establish the touch, and to regulate the sale of the precious metals as in London. These privileges were confirmed by Edward IV. The records of the goldsmiths' company of London begin about 1331 and are continuous to our own day. The pound sterling of silver has often been lessened in value since the Conquest by diminishing the weight of it, but never during the middle ages by loss of purity. In 1543 it was lowered in purity by Henry VIII. This was restored by Elizabeth in 1576.

The marks called hall marks in London are as follows, beginning with the earliest:

1. The leopard's head from 1300, called the king's mark in 1363; in fact, the head of a lion passant.

2. The maker's mark, originally a rose, crown, or other emblem, with or without initials: from 1679, with the two first letters of the surname; from 1739, with the initials of the christian and surname.

3. The annual letter, following the order of the alphabet from A to V, omitting J and U. The alphabet is changed every twenty years. This mark which shows the date of plate, when it can be deciphered, is first noticed in the form (ℌ) on a cup shown in the loan exhibition of 1862. The same letter appears on the "Pudsey" spoon left at Hornby castle by king Henry VI. after the battle of Hexham (now at Bolton Hall?). If this letter, the eighth of the alphabet, marks the year 1445 that cycle of twenty letters must have begun in 1438. This letter is the earliest as yet observed. Few marks are known of the three cycles succeeding that of 1438–57. The greater part of the cycle 1517–1537, Lombardic capitals, has been identified. The letters G. I. O. R. T. are wanting. Ten letters of the succeeding cycle are known. From the year 1560 the cycles proceed regularly down to our own time. In 1576 Elizabeth made the wardens of the London company answerable for marks stamped on impure metal.

4. The lion passant; added in 1597.

5. The lion's head erased, substituted for the crowned leopard's head.

6. A figure of Britannia substituted for the lion passant. These last two changes were ordered in 1697, in which year the standard was raised from the proportion of 11 oz. 2 dwt. pure in the lb. troy to 11 oz. 10 dwt. Plate with this mark is known as "Britannia" plate. The old standard was restored in 1719.

7. Lastly, the head of the reigning sovereign in profile, ordered in 1784, when a fresh duty was laid on plate.

For the reader's convenience the changes of annual letters from the date up to which complete cycles can be traced are here added:


BL. LET. SM. 1558–9.


BL. LET. SM. 1559–0.


ROMAN CAPS. 1578–9.


LOMB. CAPS. 1598–9.


ITALICS SM. 1618–9.


COURT. 1638–9.


BL. LET. CAPS. 1658–9.


BL. LET. SM. 1678–9.


COURT. 1697.


ROMAN CAPS. 1716–7.


ROMAN SM. 1736–7.


BL. LET. CAPS. 1756–7.


ROMAN SM. 1776–7.


ROMAN CAPS. 1796–7.


ROMAN SM. 1816–7.

Other countries followed the example of Paris and London. Amongst the German cities may be reckoned Augsburg, Nuremberg, Ulm, Luneburg, Regensburg, in which goldsmiths' guilds were established and stamps used from an early date. Mr. Riaño names many of the cities of Spain in which were corporations: and a trade of wide extent in gold and silver smiths' work was carried on. Most of these corporations used stamps showing the place of manufacture and the maker's name. Antwerp, Bruges, Tournay, Liège, Arras, and Brussels, had

corporations with statutes regulating the purity of gold and silver, the latter city enjoying separate and exclusive privileges. Two sheets of electrotype casts of stamps used in Flanders from 1567 to 1636 have been obtained for the South Kensington museum by Mr. Weale. These contain a hundred and five names of the sixteenth and eighty-one of the seventeenth century. Other sheets are in course of preparation.

Notwithstanding the laws passed in so many separate governments and corporations, great numbers of pieces of goldsmiths' work in the Kensington museum and in other collections are either without stamps or the stamps are no longer to be recognised. In recent times frauds have been practised by joining small fragments of old English plate, on which the date and other stamps are impressed, to forged pieces of recent make. The recognition therefore of English or other hall marks is not always enough to guarantee the genuineness of the piece of plate that bears them.

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